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STUDIES IN INTERRACIAL AND INTRARACIAL AGGRESSION:  
IMPLICATIONS FOR BLACK-WHITE DIFFERENCES  
IN HIGH BLOOD PRESSURE

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*Redford B. Williams, Jr.*

Dissertation submitted in partial fulfillment of  
the requirements for the degree of Doctor  
of Philosophy in the Department of  
Psychology in the Graduate School  
of Duke University

1980





ABSTRACT

(Psychology-Clinical)

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## ABSTRACT

### STUDIES IN INTERRACIAL AND INTRARACIAL AGGRESSION: IMPLICATIONS FOR BLACK-WHITE DIFFERENCES IN HIGH BLOOD PRESSURE

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Two studies explored the role of suppressed aggression in attitudinal and behavioral differences between black females with high and low blood pressure in interracial and intraracial encounters. The first study examined these differences by manipulating the race of experimenter in a survey designed to ascertain opinions regarding the socialization of aggression. The second study examined the effects of interviewer's race and sex on attitudes and laboratory behavior in order to articulate further a perspective on interracial and intraracial affective responding and its consequences for essential hypertension.

In the first study, subjects' responses to a Socialization of Aggression Questionnaire (SAQ) were factor analyzed and compared with both a conceptual model and a previous factor analysis of the instrument. Blood pressure group and race of experimenter differences in SAQ responses





were explored using analyses of variance and multiple regression analyses. In addition, correlational techniques were used to investigate relationships between various SAQ factor dimensions and blood pressure groups.

Results suggested that the SAQ had a reliable and conceptually meaningful factor structure. Further, the SAQ factors discriminated blood pressure groups and, along with the interactions of SAQ factors and experimenter's race, accounted for a significant proportion of the variance in blood pressure. The interactions of blood pressure group and race of experimenter significantly affected responses to the SAQ such that high blood pressure subjects reported a greater conflict between the suppression and expression of aggression than low blood pressure subjects, particularly after exposure to a white. By contrast, low blood pressure subjects, independent of the experimenter's race, reported less conflict.

In the second study, the responses of 64 black female undergraduates to anger provocation were assessed. Measures of blood pressure, verbal output, fantasy content, observer ratings, and self-reports were used as dependent measures. Results suggested that, contrary to the expectations derived from traditional theory, high blood pressure subjects and normals were not distinguished by an inability to experience anger overtly. Rather, they differed in how they expressed the emotion. High blood pressure subjects appeared either to become overtly intropunitive, anxious, or passive-aggressive, while low blood pressure subjects appeared either to get angry and express it or to choose not to continue to engage emotionally



in the anger-provoking encounter. When such encounters were interracial, the latter pattern of response was more characteristic in the low blood pressure group. Across all blood pressure groups, subjects appeared to engage less in cross-sex encounters.

The two studies provided evidence for the role of individual and group differences in the expression of angry emotions in the maintenance of essential hypertension. For black females in particular, the racial and sexual character of situations and residues of reported earlier socialization experiences were demonstrated as influences upon the expression of aggression. The implications of these findings for clinical, educational, and political interventions concerning anger expression in interracial and intraracial encounters were discussed.





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## CONTENTS

ABSTRACT	iii
ACKNOWLEDGMENTS	vi
LIST OF TABLES	xi
LIST OF FIGURES	xiii
 I. GENERAL INTRODUCTION	 1
The Problem of High Blood Pressure	1
The Role of Aggression in Essential Hypertension	4
Rationale for the Present Studies	11
Overview	14
 II. STUDY I	 16
Introduction	16
Overview	16
Definition of Terms: Aggression	18
Review of the Literature	30
What Socialization Practices Lead to Variations in Aggressive Behavior?	30
Are There Class and Race Differences in the Socialization of Aggression?	36
Are There Race Differences? An Alternative Approach	41
Summary	48
Methods	50
Subjects	50
Dependent Measures	50
Blood Pressure Measure	50
Background Questionnaire	50
Socialization of Aggression Questionnaire	51
Experimenters	51
Procedure	51



Results	52
Overview	52
Description of the Socialization of Aggression	
Questionnaire (SAQ)	54
The Factor Structure of the SAQ	54
The SAQ's Relationship to Background Variables	66
Relationship Between the SAQ and Blood Pressure	
Groups	67
Discrimination of Blood Pressure Groups with	
the SAQ	67
Relationships Between SAQ Factors Within Blood	
Pressure Groups	70
Prediction of Blood Pressure Groups with the SAQ	
and Other Variables	73
The Effects of Blood Pressure Group and Experi-	
menter's Race on the SAQ	75
The Effects of Blood Pressure Groups and Subject's	
Age on the SAQ	78
Description of Black Female Behavioral Responses	
to Survey Administrations	78
The Interracial Situation	79
Behavioral Responses and SAQ Reports	80
Summary	82
 III. STUDY II	 84
Introduction	84
Overview	84
Summary of Literature	84
Summary of Review of Ecologically Valid Studies	87
Rationale for the Present Study	89
Methods	91
Overview	91
Dependent Measures	92
Blood Pressure Changes	92
Fantasy Aggression	92
Verbal Output	93
Situational Affective Responses	93
Debriefing Responses	93
Subjects' Responses to the SAQ	94
Results	94
Overview	94
Hypothesis 1	98
Hypothesis 2	98
Hypothesis 3	100



Debriefing Responses	100
Verbal Output	107
Hypothesis 4	108
Hypothesis 5	109
Hypothesis 6	111
Hypothesis 7	111
Hypothesis 8	113
Hypothesis 9	114
IV. DISCUSSION	116
Overview	116
Study I	116
Study II	120
General Discussion	125
APPENDICES	129
REFERENCE NOTES	159
REFERENCES	160



## LIST OF TABLES

Table	Page
1. Varieties of Human Aggression	21
2. Angry and Instrumental Aggression	22
3. Linkages Between Parental Influences and Variables Mediating the Child's Aggressive Behavior	31
4. Interactions in the Consequence of Warmth vs. Hostility and Restrictiveness vs. Permissiveness	34
5. SAQ Survey-Derived Factors	55
6. Comparing SAQ Empirical Factors and Theoretical Dimensions	60
7. SAQ Experiment-Derived Factors	61
8. Comparing SAQ Experimental Factors with Survey Factors	65
9. Discriminant Function Analysis on Factor Scores from Survey Data	68
10. Comparing Discriminant Function Analyses of Experimental Group Using Experimental Factors and Survey Factors	69
11. Correlations Between Factors for Survey Data	71
12. Multiple Regression Analysis; Blood Pressure Predicted by Factors, Race of Experimenter by Factor Interaction, and Background Variables	74
13. Summary of Analyses of Variance on Survey Factors	76





14.	Summary of Analysis of Variance on Changes in Systolic Blood Pressure	99
15.	Summary of Analysis of Variance on Changes in Diastolic Blood Pressure	101
16.	Summary of Analysis of Variance on Debriefing Rating: Anxiety	103
17.	Summary of Analysis of Variance on Debriefing Rating: Anger-In	104
18.	Summary of Analysis of Variance on Debriefing Rating: Anger-Out	105
19.	Summary of Analysis of Variance on Debriefing Rating: Suspicion	106
20.	Summary of Analysis of Variance on Changes in the Use of Negative Words	110
21.	Summary of Analysis of Variance of Aggressive Words Before Anger Provocation	112



## LIST OF FIGURES

Figure		Page
1.	The Effects of Blood Pressure and Race of Interviewer on Changes in Systolic Blood Pressure.	99
2.	The Effects of Race of Interviewer and Sex of Interviewer on Changes in Diastolic Blood Pressure.	101
3.	The Effects of Blood Pressure Group and Sex of Interviewer on Anxiety Ratings.	103
4.	The Effects of Experimental Variables on Anger-In Ratings.	104
5.	The Effects of Experimental Variables on Anger-Out Ratings.	105
6.	The Effects of Blood Pressure Group and Sex of Interviewer on Suspicion Ratings.	106
7.	The Effects of Blood Pressure Group and Race of Interviewer on Changes in the Use of Negative Words.	110
8.	The Effects of Blood Pressure Group and Sex of Interviewer on Aggressive Words Before Provocation.	112



## CHAPTER I

### GENERAL INTRODUCTION

#### The Problem of High Blood Pressure

Hypertension is the term used to describe continuously elevated blood pressure over time. It was estimated by the National Institutes of Health (1976) that approximately 90% of all abnormally high blood pressure is "essential hypertension," that is, hypertension of unknown organic origin. Weiner (1977) pointed out, however, that high blood pressure and essential hypertension are not always synonymous. Blood pressure elevations may occur in a variety of conditions, and new forms of high blood pressure are continually being discovered. He added, "At the present time, essential hypertension is probably a heterogeneous disease made of several unspecified subgroups" (p. 108).

Along with the definition of essential hypertension as continuous blood pressure elevation, the other two agreed-upon characteristics of the disease are: (a) It runs in families, and (b) there are physiological changes only in the latter stage of the disease.<sup>1</sup> It is also generally accepted that

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<sup>1</sup>An increase in peripheral resistance is one example. To limit the task here, very little has been included about the physiological aspects



there is a genetic predisposition in those who develop essential hypertension. Nevertheless, Weiner noted,

There is disagreement about every other aspect of its etiology and pathogenesis. The main, if not the only, reason for this disagreement is that we have no recognized way of predicting who will develop essential hypertension and cannot determine the sequence of events that lead up to it. (p. 108)

It is apparent, then, that essential hypertension is a complex medical problem; the literature is replete with varying opinions about every aspect of the disease. There has been no uniform consensus reached on the upper limits of normal blood pressure, for example. Nonetheless, the arbitrary cutoff point used by many in the field is 140 (systolic) over 90 (diastolic). Thus people with blood pressures consistently over 140/90 are seen as hypertensive. If either diastolic or systolic pressure only is consistently high, a diagnosis of essential hypertension is also likely.

Another major debate in the literature of essential hypertension concerned whether the disease is qualitatively or quantitatively different from the normal range of blood pressure. A classic argument began with Sir George Pickering, who saw essential hypertension as a quantitative disease, representing the high end of a normal blood pressure distribution, influenced by a number of genetic and environmental factors, and R. Platt, who advocated that there was a qualitative difference between those in the high range of normal blood pressures and those with essential hypertension,

---

of the disease, though such consideration is certainly necessary for a complete picture.





due to some specific genetic differences that have not yet been identified.

Supporting Pickering's argument was evidence that persons with "high normal" or borderline hypertension were more likely than others to develop essential hypertension (sustained blood pressure levels). It was also demonstrated that blood pressure levels are labile in all persons, and there is more lability in some people than others. Some studies (Osfield, 1960) have demonstrated that people with a tendency to have greater variability in blood pressure readings were more prone to develop essential hypertension than others. Weiner has pointed out a methodological problem with this theory, however. Several different patterns of excessive lability have been observed as a function of variations in experimental procedure. Thus, the predictive potential of this notion should be considered with caution. Given these apparent connections between people in the high normal range of blood pressure and those who later develop essential hypertension, however, it is difficult for most researchers to accept Platt's relatively simplistic genetic theory. Indeed, most investigators accept a multifactor causation theory as the basis of essential hypertension since there is no consistent evidence to suggest otherwise. Weiner has argued that different causes may trigger and/or maintain the disease in different people.

It is apparent, then, that essential hypertension is still quite a mystery to the health field, even though its prevalence is overwhelming. Data from the National Health Examination Survey of the Public Health Service



indicated that in 1973 15% of whites and 28% of blacks had hypertension (based on the World Health Organization criteria, systolic 160 and/or diastolic 95). This means that 20 to 25 million Americans have essential hypertension. Stamler, Stamler, and Curry (1974) noted that if 140/90 is used as the cutoff, the prevalence increases to 38 to 40% in an inner city black adult population (Washington, D.C.).

As is evident from these figures, blacks are almost twice as likely as whites to develop the disease. Essential hypertension is in fact the number one health problem in the black community (Henry & Cassel, 1969). In addition, it is also a major risk factor in such crippling cardiovascular diseases as heart attacks and strokes, which are among the five leading causes of death in the United States.

#### The Role of Aggression in Essential Hypertension

Set: January, 1980.

Joyce, a 22-year-old, enthusiastic, bright black female, is describing her experience substituting in a local junior high school to a girl friend. Her cheeks are flushed, her eyes are darting back and forth, her posture is rigid; she looks angry enough to explode.

J: Girl, I got so mad at that peckerwood<sup>1</sup> I could have killed her. How dare her white ass to not only treat me like a child, but like an imbecile. I don't know what kind of niggers she is used to dealing with, but I'm a new nigger and I won't take that shit, you hear me, Arnie?

A: (nods agreement). What did you do, Joyce?

---

<sup>1</sup>This is a colloquialism used by blacks to refer to a member of the Caucasian race.



J: Girl, I saw blood, but I held my tongue. If I had spoken, I was scared I would have jumped all over her! Girl, those white folk are going to be the death of me yet! But if I do end up dying, I'm going to take a few with me!

Joyce, in the above illustration, found out in 1978 after several visits to her physician that she has borderline essential hypertension; that is, her blood pressure has become chronically elevated in the absence of any organic malfunction. She discovered the problem in the course of a regular annual physical and has never had any symptoms, which her physician explained is usually the case. She was told only to watch her salt intake, to keep her weight down (she was then only 10 lbs. overweight; now she is about 15 lbs. over her ideal weight), and to get her pressure taken monthly so that if it continues to rise she can be placed on the appropriate medications. Joyce has no idea about what might cause or exacerbate the problem in her case, and she tries not to think about it.

The preceding scenario is a common experience of black American women and men in 1980. It raises the questions to be addressed in this investigation:

1. How have black females learned to deal with anger in interracial and intraracial situations?
2. How do black females with high blood pressure differ from those with low blood pressure in the expression of anger in interracial versus intraracial situations?

In this section, psychological correlates relating to the etiology and maintenance of essential hypertension are described.

The causes of essential hypertension have interested psychologically



oriented investigators since Angell and Thompson (1899) and Canon (1923) demonstrated rises in blood pressure, along with other physiological changes, in response to emotional stimuli. Because such possible etiologic factors as heredity, salt intake, nutrition, obesity, and cigarette smoking have not actually explained much of the variance in occurrence of the disease (Henry & Cassel, 1969), examination of psychological variables has remained prominent in the literature.

Franz Alexander (1939) was perhaps the most notable initial proponent of the hypothesis that suppressed anger was a primary dynamic in the psychological makeup of a person who has essential hypertension. He and several other psychiatric investigators (Dunbar, 1948; Hambling, 1951, 1952; Hill, 1935; Moses, Daniels, & Nickerson, 1956; Saul, 1939; Weiss, 1939) subscribed to a psychoanalytic formulation of the hypertensive personality. Such personalities were characterized by an intrapsychic conflict between expression of anger (or hostility, used synonymously) and fear of loss of love. This formulation was based largely upon examination of the clinical cases of these investigators. This conception has been criticized mostly because of the subjective nature of clinical judgments and, perhaps more importantly, because the construct of "suppressed aggression" lacks clarity in psychoanalytic theory.

Since these initial investigations, four major and somewhat overlapping hypotheses have been offered as explanation for the psychosomatic aspects of essential hypertension (Binger, 1951; Buss, 1961; Lennard &





Glock, 1957; McGinn, Harburg, Julius, & MacLeod, 1964; Menninger, 1938; Scotch & Geiger, 1963; Shapiro, 1960; Weiner, 1977):

- I. There is a "hypertensive personality"--a certain type of person who is most likely to be hypertensive. That person is described as overtly friendly, nice and compliant, but covertly anxious and aggressive.
- II. People who are likely to be hypertensive have a common specific psychological conflict, usually between expression of aggression and fear of disapproval, rejection, etc. These persons are seen as suppressing aggression or hostility.
- III. The effects of environmental stress for some (predisposed) individuals are so persistent and intense that the recurrent physiological reactions result in permanent hypertension.
- IV. A combination of personality and environmental variables leads to essential hypertension; that is, because of the stressful nature of the environment of certain individuals (and/or their perception of the environment), it is necessary that they continuously suppress hostility and appear friendly, calm, and detached.

Examination of the hypotheses suggests two major types of variables:

(a) people's reactions to anger, and/or (b) their reactions to environmental stress. Although investigators disagree on how these variables work in the hypertensive, these are the two factors generally considered to be the psychosomatic or psychological link in the chain of etiology and/or maintenance of essential hypertension.<sup>1</sup> Each of the four hypotheses is discussed in greater detail below.

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<sup>1</sup>Although an adequate review of the current literature on psychological treatments for essential hypertension was beyond the scope of the current effort, evidence for this claim was that relaxation training, various forms of assertiveness training, and other strategies geared toward helping people change their habitual hyperreactive response to upsetting stimuli are among the major treatment approaches (Deabler, 1973; Jacob, Kraemer, & Agras, 1977; Shapiro, Schwartz, Ferguson, Redmond, & Weiss, 1977).



Hypothesis I, the hypertensive personality view, has been considered the least plausible explanation in its usually presented form (Glock & Lennard, 1957). Its proponents claimed that a certain type of person, conflicted between appearing nice and suppressing anger, was most likely to become hypertensive. Glock and Lennard noted the following difficulties with the hypothesis:

- (a) The formulations of the hypothesis by different investigators are neither consistent nor theoretically integrated.
- (b) The evidence offered in support of the hypothesis is limited.
- (c) The claim that the hypothesis is specific to the disorder of hypertension is not amply supported.
- (d) The psychologic components of the "hypertensive personality" are not described with sufficient precision to permit their objective measurement by independent investigators. (pp. 175-177)

They concluded that "these difficulties make it impossible to incorporate the 'hypertensive personality' hypothesis at its present stage of development in a long-term study of hypertension" (p. 177).

The second hypothesis that has been offered is that people who are likely to have essential hypertension are those who experience a common specific conflict between anger expression or repression. It has received considerable attention in the psychosomatic literature, and is one of the two major foci of the current research. As already discussed, psychoanalytically oriented clinicians initiated the hypothesis. Such investigators as Saul and Sheppard (1954, 1956), Matarazzo (1954), Osfeld (1959), Osfeld and Lebovits (1960), Osfeld and Shekelle (1967), Pilowsky, Spaulding, Shaw, and Korner (1973), Esler (1977), and McClelland (1975, 1979) used a wide variety of psychological measures to test the hypothesis.



Other studies also attempted to present behavioral evidence that would substantiate the claim (Gambaro & Rabin, 1969; Gentry, Harburg, & Havenstein, 1973; Harburg, Erfurt, Havenstein, Chape, Schull, & Schork, 1973; Harris, Sokolow, Carpenter, Freedman, & Hunt, 1953; Hokanson, 1961; Hokanson & Burgess, 1962a, 1962b; Hokanson, Burgess, & Cohen, 1963; Kalis, Harris, Sokolow, & Carpenter, 1957; Schachter, 1957).

Although some of these investigations have provided contradictory evidence, as will be discussed in more detail later, the results have not disconfirmed the view that persons who are likely to be hypertensive have a common psychological conflict about aggression-expression.

The stress hypothesis, III, is a feasible explanation and could be incorporated in an ongoing longitudinal study of essential hypertension. In the absence of such longitudinal evidence, however, the view, of necessity, remains somewhat speculative. Available information has suggested that most often there is more essential hypertension in areas of higher environmental stress (Harburg et al., 1973; Henry & Cassel, 1969). This evidence must be considered, though whether or not the stress caused the problem has not yet been ascertained. This interesting hypothesis would require a paper in itself to be discussed in full. It will be referred to somewhat more in this work, but generally in relation to Hypothesis IV (to be described below), the role of stress in the development and/or maintenance of psychologic conflict.

The conflicting nature of the investigations on the role of suppressed





aggression in the hypertensive has led many investigators to examine Hypothesis IV, that is, to look at the interaction of environmental and personality factors. This is the second major focus of the work to be presented in the following sections. Wolf, Pfeiffer, Ripley, Winter, and Wolff (1948), Weiner, Reiser, and Singer (1962), Williams and McKegney (1965, 1967), Harburg et al. (1973), and Singer (1974) are among researchers who have examined differences in the behavior of high and low blood pressure subjects within various interpersonal or situational contexts. Singer demonstrated, for example, that the behavior of persons with essential hypertension was not consistent over all situations. Further, whether or not hypertensives responded to anger-provocation situations with rises in blood pressure seemed to be a function of their involvement in the task. Harburg (1973) found that black hypertensives in the highest stress areas reported the most suppressed hostility. Again, this suggested a personality by environment interaction. It is highly likely, however, that Hypothesis IV will have to be extended to take into account such factors as age, racial, and mechanistic differences. Possible consequences of these factors on blood pressure are discussed below.

1. Age differences: Do young hypertensives or pre-hypertensives go through a period where they actually get more angry than normals? Do they, as a result of the physiological and/or emotional consequences, quickly learn to disengage from such situations and appear calm?
2. Racial differences: Do black and white hypertensives tend to respond to different environmental stimuli in different ways?
3. Mechanistic differences: Are the mechanisms that cause essential hypertension different from those that sustain it?





Despite these unanswered questions, Hypothesis IV is the most comprehensive of the views described, since it takes into account situational factors as well as individual responses.

The overall goal of the present work is to test Hypothesis IV within a black sample. The specific claim to be tested is that people with higher blood pressures will experience significantly greater conflict between expression and suppression of angry feelings in interpersonal situations than those with lower blood pressures. This conflict will be manifest in their behavior and in their self-reports. The conflict may manifest itself in "nice," compliant overt behavior with covert anger expression, or it may result in a person who seems to be fairly constantly hostile and angry, as if there were no way to be free of it.

#### Rationale for the Present Studies

The two studies to be discussed in the following pages are an effort to focus on two inadequately explored aspects of the role of aggression in essential hypertension: (a) the socialization of aggressive behavior in blacks with high and low blood pressure, and (b) the differences in aggressive behavior between the two blood pressure groups.

It has been claimed that hypertension is significantly more prevalent among black Americans at least partially because of the historic need to learn to inhibit expression of anger directly to whites (Scotch & Geiger, 1963). To the extent that this is true, one should be able to discern different responses to anger-provocation situations between blood pressure



groups within the black race. The research project to be presented is also an effort to examine the suppressed aggression hypothesis in the interpersonal context, using behavioral, observational, and self-report data, thus allowing for ecologically valid measures of aggression. The studies to be reported here grew out of Batts' (Note 1) earlier work and are an effort to clarify further the results reported therein. Before preceding, the earlier investigation is briefly summarized and then related to the current investigations.

Sixty-four female undergraduate students at a local, predominantly black college participated as volunteers. They were divided into high and low blood pressure groups and were scheduled for a 1-hour interview. The experimenter took each subject's blood pressure at the beginning of the interview while giving them a general introduction to the procedure (see Appendix A). The subject was then introduced to a second interviewer and asked to make up stories in response to 10 Thematic Apperception cards (see Appendix B). Each of the last five stories was criticized in a standardized manner by the interviewer.

After the anger-provocation situation, the experimenter took each subject's blood pressure again and then debriefed her (see Appendix C). The subject then completed two questionnaires, the Socialization of Aggression Questionnaire (SAQ) and the Leary Interpersonal Checklist. Eight interviewers were used: four black and four white, four male and four female. Each completed behavioral assessments of the subject.



In this study, analyses were reported for some of the dependent measures, including the Leary Interpersonal Checklist, interviewer ratings, and individual SAQ items. Unanalyzed were data on blood pressure, fantasy aggression, verbal output, postexperimental verbal response, and derived SAQ scores. The results of the analyses performed suggested, in general, that low blood pressure subjects did not let themselves get angry, relative to the high blood pressure group, after being exposed to a white interviewer. High blood pressure subjects appeared most upset in that situation, though they continued to comply. Both groups tended to report the desirability of less expression of aggression on socialization measures after exposure to a white interviewer. Some experimenter sex differences were also found; in general, all of these female subjects seemed more affected by male interviewers.

Given that many individual items on the SAQ were significant, and that there were several unanalyzed dependent measures, it became clear that further examination of the available data might add clarity and strength to the initial findings. Accordingly, the Batts (Note 1) data were reanalyzed to include additional variables and SAQ factor scores, to be described below. The hypotheses tested by the data analyzed in the original study were largely related to Hypothesis II, the claim that individuals who are likely to become hypertensive will demonstrate a conflict about expression versus inhibition of aggression. The results, however, suggested that the hypothesis is too narrow. Although there were differences



in the behavior of the two groups, they were not usually in the direction predicted. It is currently believed that this was because high and low blood pressure groups differ with respect to the situational factors that influence their aggressive behavior. The current research is an attempt to evaluate this latter interpretation.

It should be stated at the outset, however, that the studies to be reported are less than completely satisfactory because they are not longitudinal and thus cannot answer with certainty many of the questions they raise. As has been indicated, it seems clear that most, if not all, questions about psychosocial factors in essential hypertension will remain unanswered in a final way until extensive investigations over time are conducted. Nonetheless, the current work is justifiable because it gives new, sorely needed information about the effects of the black experience on essential hypertension.

### Overview

Two studies will be discussed in this paper. The first study will involve an analysis of the results of two administrations of a Socialization of Aggression Questionnaire (SAQ) devised by the investigator. The SAQ was first administered to 64 black females who participated in an experimental study involving a simulated anger-provocation situation. The second administration was in survey form at several public places. In the latter study, black female volunteers were given free blood pressure readings in exchange for completing the questionnaire. Race of





experimenter was varied in both administrations, and responses across and between blood pressure groups were examined. When the SAQ was first administered in the laboratory experiment, sex of experimenter was also manipulated, though this was not true in the second survey administrations.

In order to clarify the new interpretation of the Batts (Note 1) data suggested above, the analyses of the effects of experimental variables (race and sex of interviewer and blood pressure group) on blood pressure responses, fantasy content, length of TAT stories, and debriefing reactions will be provided as a second study.



## CHAPTER II

### STUDY I

#### Introduction

##### Overview

In the literature review to follow, the following question has been addressed: Are there recognizable patterns of differences in the socialization of aggression in the black and white populations of the United States? This question is important when one considers the possible intrapsychic and interpersonal consequences to blacks of racism and classism in this country. Specifically, as noted in the previous chapter, there is overwhelming support available for the assertion that blacks have historically had to learn to suppress or inhibit aggression toward whites. Anecdotal support was provided by examination of such literature as Negro spirituals and stories with a "turn the other cheek" theme, as well as writings by blacks who have captured various components of the black experience (Ralph Ellison, Claude Brown, Langston Hughes, James Baldwin, and Gwendolyn Brooks, to name only a few). The psychological literature on current differences in aggression by race is scarce, but it has generally suggested that blacks inhibit aggression toward whites (Gentry, 1972).



The belief to be examined in this work is that the historical experiences of black Americans are a part of the present culture and that, given the continuing existence of racism and classism in this country, there is still a socialization process that supports this outcome.

"Training to be a black" (E. Baughman, 1971), then, has been part of the socialization experience of most black Americans. Baughman wrote,

It was aggression . . . that had to be eradicated, for aggression would lead to counter-aggression and even destruction by the white man.

The present world of the black American is not as threatening as it used to be; however, one can hardly describe it as benign. Moreover, once child-rearing practices are adopted by members of a group, they change only slowly. (p. 87)

Given this apparent difference in black and white experiences, it seemed a logical next step to examine the socialization process, that is, to look at the way in which children learn to take their place in the social structure (Kerckhoff, 1972).<sup>1</sup> Although it can be argued that acquisition of behaviors, like aggression, is at least partially an innate process (Buss, 1961), below, a model of socialization of such behaviors as an acquired process is adopted. At the human level, this is generally the more widely accepted view.

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<sup>1</sup>Review of the socialization literature (Hess, 1970; Kerckhoff, 1972) revealed several factors which contribute to an individual's adoption of his or her social role; the family, the school, peers, and the media being major ones. Because the family is generally considered the earliest socializing agent, and because its role seems to be particularly significant in the training of handling aggression, this work has concentrated on child-rearing practices within the family. Robert Staples (1971) noted the finding that the influence of peer groups on socialization in lower class black and white populations is greater than in the middle class. By choosing to study the influence of the family, then, it is important to note that another major influence remains largely unexplored.



First, current evidence for racial differences in the socialization of aggression will be examined. Next, the results of two empirical investigations conducted with black females, to see if the trends suggested by the literature are apparent in these samples, will be outlined. Finally, the implications of these findings for future research, clinical intervention, and political action will be discussed. To the extent that essential hypertension is one outcome of continued conflict regarding aggression-expression, it is clearly important that the connection between attitudes/behaviors regarding aggression expression and blood pressure levels be illuminated.<sup>1</sup>

#### Definition of Terms: Aggression

The investigations of hypertension done by mental health

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<sup>1</sup> An important political claim is relevant here. This dissertation should not add to the sociological literature regarding the pros and cons of the black family. It has not been established that the "disorganization of the black family" (Moynihan, 1965) is responsible for the current status of black people in America. As William Ryan (1976) pointed out quite dramatically, it is very easy for liberal social scientists and politicians to get involved in blaming and changing "the victim." This approach too often implies that oppressed groups cause their own social problems. It is clear to this author that black people are not the cause of our conditions and that a fundamental change in the structure of American society is the ultimate "cure" of our social ills.

It is the position of the current work that black people made a conscious and rational choice to inhibit aggression against whites historically for the survival of ourselves as a race and as individuals. It is further believed that now that the position of blacks is changing in this country new choices will be made and are in fact being made by parents in their socialization practices. It will be possible to facilitate that process by examining what these practices have been and how they are changing or how they might be changed.





professionals, largely psychiatrists initially, led to the hypothesis that suppressed anger (alternately called "hostility," "rage," and "aggression") was a primary dynamic in the psychological makeup of the person who had the disease. The first developers of this theory were psychoanalytically oriented, thus the first definitions of aggression are taken from that field. This implies "the image of an aggressive anger welled in by constraint, a conflict part conscious, part unconscious" (Hambling, 1952, p. 47). Alexander, Saul, Dunbar, and others described the hypertensive conflict between angry aggression (or hostility, used synonymously) and fear of loss of love, yet they did not go any further than Hambling's comments above in terms of definition. As Glock and Lennard (1957) noted, these psychoanalytic formulations are not defined in terms of the behaviors to which they refer. Of course, this is a problem with psychoanalytic theories in general. In this case, it is difficult for an independent observer to say what aggression is explicitly; thus, to say what "constrained aggression" or "pent-up hostile aggressive impulses" are is even more difficult. From these conceptualizations, then, one gets essentially only an intuitive idea of the aggressive component in the clinical cases cited.

Another approach to the definition of aggression builds on the ideas of Berkowitz, Dollard, Doob, Millar, Mowrer, and Sears.<sup>1</sup> Arnold Buss'

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<sup>1</sup>These investigators have made various contributions to the formulation of hypotheses about aggression, the frustration-aggression hypothesis and the cathartic hypothesis being examples. All have been concerned with behavioral manifestations in these formulations.



(1961) formulations included the behavioral components of these theorists and expanded their work to include several varieties of human aggression. He defined aggressive responses as the delivery or attempt at delivery of noxious stimuli in an interpersonal context. Table 1 outlines types of human aggression.

The usefulness of this conceptualization is that it deals with aggression in terms of observable behaviors. Thus, when such a formulation is used in a given study, an independent investigator can be much more certain that he/she actually knows what behaviors are being examined.

Matarrazzo, for example, defined aggression in a similar manner in his 1952 dissertation research (Note 2), noting that an aggressive act was an attempt to deliver injury to an organism or organism-surrogate. The aggressive act could be implied or explicit, while the injury might be physical or psychological in nature. He was then able to study aggressive behaviors in essential hypertensives in an easily reproducible laboratory study (1954). Buss went on to make a further distinction, relating to the kinds of aggression people can experience. Table 2 illustrates this formulation.

It seems that the type of aggression discussed most frequently by psychoanalytic theory is angry aggression, thus it would be continued suppression of the physiological angry emotion which would lead to essential hypertension. This might also help explain why some hypertensives can be quite aggressive in various situations. It might be that the



Table 1  
Varieties of Human Aggression<sup>a</sup>

	Active		Passive	
	Direct	Indirect	Direct	Indirect
<u>Physical</u>	Punishing the victim	Practical joke	Obstructing passage; sit-in	Refusing to perform a necessary task
<u>Verbal</u>	Insulting the victim	Malicious gossip	Refusing to speak	Refusing consent; vocal or written

<sup>a</sup>From Buss, in Singer, p. 8.



Table 2  
Angry and Instrumental Aggression<sup>a</sup>

	Stimulus	Emotion	Response	Reinforcer
<u>Angry aggression:</u>	Anger-inducers, insult, attack, annoyers, etc.	→ Anger	→ Aggression	→ Discomfort of victim: pain, suffering, embarrassment, etc.
<u>Instrumental aggression:</u>	Competition, a reinforcer possessed by another person	→ (none)	→ Aggression	→ Acquisition of the reinforcer; victory, food, money, status, etc.

<sup>a</sup>From Buss, in Singer, p. 11.





reinforcers for instrumental aggression are quite high, such that lots of aggressive responses occur to varied stimuli. In other words, it might be that the "stimulus" which will initiate either angry or instrumental aggression is a way to discuss the different kinds of environmental variables that lead to an aggressive response. It might be, for example, that a black child is taught to respond with aggression (rapid, forceful movement) when competition is the stimulus and victory the outcome, in the area of sports. He/she might be encouraged to inhibit an angry aggressive response to an insult by a white schoolmate, though, because discomfort to the "victim" might have larger negative payoffs for the black child (given the actual racial situation and/or the perception of the child's parent).

Thus, aggression in this formulation becomes environmental in nature. Anger is a physiological response, yet it is argued in the present work that these varieties of human aggression are learned. Harry Kaufman (1970), who agreed with Buss' definitions, offered this assertion. He wrote,

Once we overcome the engrained pre-conception of aggression as a unique attribute of people and animals, it becomes overwhelmingly clear that processes whereby we learn other social behaviors must be operative also in the learning of aggressive tendencies. (p. 55)

He also noted that, in addition to a person's acquiring individual experiences that affect his aggressive behavior, he/she also acquires "a set of cultural norms regarding the appropriateness of aggressiveness" (p. 55). What people learn, then, is how to behave and how to view the



environment. Weiner (1977) noted that no studies in the psychosomatic literature examine the families or family relationships of hypertensives; thus, little if anything is known about the role of learning in how these people handle feelings of anger.

Buss further defined aspects of aggression. He noted, for example, that certain socially accepted behaviors involving the delivery of noxious stimuli are not labeled "aggressive" (a dentist pulling a tooth, for example); neither is an accidental delivery of such stimuli. He also differentiated hostility as a "negative attitude, with attitude defined in terms of implicit verbal responses" (p. 12). Aggression might or might not have hostile elements, and the latter could be inferred when there were connotations of vengeance, that is, when attack was reinforced more by injury to the other than by attaining an extrinsic reinforcer. Hostility was considered a conditioned response stemming from angry aggression rather than instrumental aggression. He asserted further that hostility learned second-hand did not lead to aggressive acts. If true, this would have important implications for what the children of hostile parents do with stored-up angry feelings. Buss noted finally that, unlike angry or instrumental aggression, which have a short temporal span, hostility was an enduring experience.

Given the historic position of blacks in this country, as outlined above, the stored-up hostility hypothesis needs to be tested within a black community. Though black children may continue to watch their parents



suppress aggression against whites, it is possible that the parents also continue to experience hostility over time which their children observe. As a result of watching their parents, the children may themselves acquire hostile feelings toward whites, while also learning not to express these feelings directly. It follows that they would just maintain and build upon such feelings. This certainly would create a unique outcome for the black American.<sup>1</sup>

Hoppe (1971) noted from a psychoanalytic work with survivors of persecution that suppressed aggression (angry type) and hostility were among the most salient clinical features in their personality. She viewed the fate of these survivors of Nazi persecution as similar to that of black Americans in that both were used as scapegoats of their society and both had suppressed aggression and hostility. Parenthetically, she also reported another relevant finding; that is, as "the survivor can identify with a group fighting a common enemy, the inner conflict is alleviated" (p. 235). In other words, the inhibition of angry aggression because of position in society has led to an internal hostile experience for many blacks (see also Grier & Cobbs, 1968); many have suggested that this state is psychopathological for the individual, but it seems this experience can be readily overcome as individuals feel collective support for expressing

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<sup>1</sup>As will become clearer, differences in the content of socialization rather than the form are actually being discussed. The form of the socialization practice here is modeling. It occurs in all social groups. The content being modeled in this instance is the hostility of black parents toward whites and so may be particular to the black parent.





aggression. This points out again the need to examine socialization practices to see if and how they foster suppression of aggression and modeling of hostility.

Suppression of angry aggressive responses, then, is believed to be what is meant by suppressed aggression in the psychosomatic literature if one translates the information to fit Buss' scheme. Suppression of hostility, that is, of negative attitudes, may also accompany the suppressed aggressive behavior. It is hypothesized that other forms of aggression one might see in the hypertensive person can be defined as primarily instrumental aggression. Angry aggression and/or hostility might occur in such individuals in response to certain stimuli only and/or given the type of reinforcer. It is useful to talk about aggression in this way because it would be possible to set up or isolate explicit stimuli and reinforcers, and to observe people's responses, while noting whether or not there was a physiological anger emotion experienced. One could test the hypothesis that hypertensives would respond with fewer aggressive responses to anger-inducing stimuli, while their emotional anger response was the same as normotensives. They might also respond more to instrumental aggression-inducing stimuli than normotensives because of a need to please others by being successful in a competitive manner (victory and acceptance being the reinforcers).

The above ideas are meant to be illustrative of how one might look at current theories about aggression and its suppression in many persons





with essential hypertension. Of course, the stimuli and reinforcers would need to be clearly defined, and one would still have some problems being objective in so doing, as in psychoanalytic theory, yet the emphasis on observable behavior would certainly improve attempts at investigations of such theories.

It is true that Arnold Buss' definitions of aggression are somewhat limited (Johnson, 1972). He does not clarify the place of self-aggression, displaced aggression, or assertion, for instance. He also does not address how people learn to express or inhibit angry emotions. Although a full consideration of these concepts is beyond the scope of this work, a brief description of each seems indicated as they are considered implicitly in the two studies to be discussed.

Self-aggression can be described as application of noxious stimuli toward oneself. The anger-inducer could be another person or object and/or any internal process (an attitude, belief, etc.). Causes for such behavior are often defined in terms of individual psychopathology. The concept "displaced aggression" has a similar implication, except that the attempt at injury would tend to be directed at anyone (self, other person, or object) other than the anger-inducer.

Clarifying assertion and aggression is a major focus of current behavior research (Alberti, 1977; DeGiovanni & Epstein, 1978; Hollandsworth, 1977; MacDonald, 1978). DeGiovanni and Epstein (1978) differentiated aggressive acts as "those directed toward the achievement of one's



goals at the expense of others, while assertion involve[d] self-enhancement without depreciating and violating other's rights" (p. 175). The major difference, they explicated, was the coerciveness involved in aggressive behavior. "Both nonassertion (passivity, withdrawal, submissiveness) and aggression [can be] classified as unassertive behaviors" (p. 175).

Successful aggression-expression can be viewed as similar to assertion; that is, a person can say, "I feel so mad at you right now that I want to hit you!" while at the same time communicate that he or she is sharing information and is not offering a threat. This is a classic explanation for assertion, the imparting of information in a manner that does not demand behavioral change on the part of the listener (though it may be an attempt to increase the likelihood that the other will choose to change). The research to be presented in this work has taken into account differences between such forms of behavior as dysfunctional aggression-expression, passive aggression, submissiveness, or nonassertion, and more functional forms of aggression-expression such as feeling and then expressing or choosing not to express angry feelings while at the same time thinking objectively about the other.

Before leaving this topic, several ideas will be considered regarding how people learn to suppress or inhibit aggression or to be aggressive in a nonassertive way.

Fear of punishment was thought to be an external, often situation-specific, inhibitor of aggression-expression (Staub, 1971). Feshbach



(1970) pointed out, however, that the evidence was not firm in support of this idea because sometimes punishment led to more aggression rather than to fear of it. This latter finding, though, was certainly a plausible explanation for how some children might learn to aggress often, though in a dysfunctional (i.e., non-problem-solving) way. McCord, McCord, and Howard (1961) have presented evidence to support this idea.

Feshbach viewed the lack of clear evidence that fear of punishment led to aggression suppression as support for the assertion that the development of empathy and internalization of norms were essential in the inhibition process. Staub also noted the importance of development of empathy, though he believed that following instigation such that a person felt angry, empathy would be reduced. He added that internalization of anxiety about aggression and guilt were also inhibitors.

Examination of these various hypotheses highlights the need to investigate the types of socialization experiences common to people who feel and express anger directly in a noncoercive fashion, as compared with those who are most often angry and anxious (directed at self and/or others), those who most often are angry and destructive (directed at self and/or others), or those who most often deny their anger outwardly and appear withdrawn, passive, submissive, or guilty. There is also that category of people who engage most often in instrumental aggression, as in the case of competitive behavior. As Singer (1971) and Buss (1971) noted, a high value is placed on this form in our society, especially.



In the above section, aggression has been defined from several perspectives. Theories of the socialization of aggression expression and inhibition have been reviewed. This discussion indicated the necessity of a behavioral and multi-component perspective on aggression and its determinants.

### Review of the Literature

#### What Socialization Practices Lead to Variations in Aggressive Behavior?

The study of the socialization of aggression is a very complex task for several reasons (Feshbach, 1970). First, a parent is most often in the position of responding to an individual child's feelings, while attempting to guide the child's behavior and to deal with the parent's own spontaneous feelings; second, none of this occurs in a vacuum; third, any aspect may vary given the situation. It is also true, finally, that by looking at correlations between a child's aggressive behavior and parental behavior one cannot actually establish etiology because there are many possible intervening variables. The models to be discussed in the following pages must be considered only theoretically useful, then, because they assume that certain inputs (i.e., parental behaviors) lead to certain outputs (i.e., degrees of child aggressiveness) without explicitly taking into account individual difference and/or situational variables.

Feshbach offered the model shown in Table 3 to describe the socialization of aggression process. His model included all the techniques





Table 3

Linkages Between Parental Influences and Variables  
Mediating the Child's Aggressive Behavior<sup>a</sup>

Parental influences	Attributes of the child mediating his aggressive behavior
Generalized parental attitude and behaviors:	
Acceptance, warmth-rejection, hostility	Instigation to aggression (aggressive drive)
Permissiveness-restrictiveness	Ego controls
Emotional stability-instability	
Socialization of specific behavior systems:	
Weaning, toilet training, independence training	Instigation to aggression Ego controls
Permissiveness and reinforcement of aggression	Strength and repertoire of aggressive behaviors
Punishment of aggression	Inhibition of aggressive behaviors Instigation to aggression
Aggressive versus nonaggressive parental models	Strength and repertoire of aggressive behaviors

<sup>a</sup>From Feshbach (1970).



and parenting styles that have been associated with the socialization of aggression by numerous authors (Bandura, Ross, & Ross, 1961; Bandura & Walters, 1959; McCord, McCord, & Howard, 1961; Sears, Maccoby, & Levin, 1957). Following is a brief description of them:

1. Love-oriented techniques: Include rewards, praise, and threat to the loss of the love relationship by isolation or withdrawal of love.
2. Power-assertive techniques: Include physical or verbal punishment; threats, yelling, shouting, and forceful commands (expressive responses).
3. Use of induction: Includes techniques which lead to the internalization of norms; communication about rules; reasoning and concern about the intentions behind behavior.
4. Modeling: Involves the child's observation and imitation of the parent's behavior.

It is generally accepted that love-oriented techniques and induction lead to the inhibition of aggression toward other people because they facilitate identification, internalization of norms, and the development of empathy. Although the literature is unclear on the point, the implication is that the inhibition is in line with some normative standard of when and how to express angry feelings. Dysfunctional inhibition, then, would not exist if the child actually learned to take another's side rather than, say, just to fear punishment.

Modeling seems to lead to behavior like that of the person being observed. In Bandura, Ross, and Ross' study (1961), the children imitated aggressive and nonaggressive models. McCord et al.'s work (1961) suggested that consistency of nonaggressive behavior of the parental



model may also correlate positively with the child's nonaggressive behavior.

Punishment is probably the most significant child-rearing practice in relationship to aggression. As noted in the previous section, two alternative outcomes have been observed: Punishment has been demonstrated to result in the inhibition of aggression (Staub, 1971) or to result in an increase in non-problem-solving aggressive behavior (Feshbach, 1970). Further research must explicate under which sets of conditions each of these outcomes will occur. Becker (1964) has come closest to helping clarify the apparently opposite results. He has postulated a theory of discipline which ties together a lot of the apparent disparities found in the exploration of the effect of punishment and the other child-rearing practices. He used two dimensions or styles that parents exert along with their disciplining practices which help clarify the relationships:

1. Warmth vs. hostility: This dimension speaks to the parent's general attitude toward the child; how much love is displayed.
2. Permissiveness vs. restrictiveness: Relates to the amount of flexibility the child is allowed in behavior as opposed to the demand for conformity.

Becker has constructed a chart which shows the interactive effects of these two dimensions on aggressive behavior (see Table 4). Although results remained somewhat contradictory, Becker's construction fits most theories of outcome of parental influence on child aggression: In general, parents who are high on warmth and restrictiveness tend to produce compliant children who are lacking in spontaneity; parents who are high on



Table 4

Interactions in the Consequence of Warmth vs. Hostility  
and Restrictiveness vs. Permissiveness<sup>a</sup>

	Restrictiveness	Permissiveness
Warmth	Submissive, dependent, polite, neat, obedient (Levy) Minimal aggression (Sears) Maximum rule enforcement, boys (Maccoby) Dependent, not friendly, not creative (Watson) Maximal compliance (Meyers)	Active, socially outgoing, creative, successfully aggressive (Baldwin) Minimal rule enforcement, boys (Maccoby) Facilitates adult role taking (Levin) Minimal self-aggression, boys (Sears) Independent, friendly, creative, low projective hostility (Watson)
Hostility	"Neurotic" problems (clinical studies) More quarreling and shyness with peers (Watson) Socially withdrawn (Baldwin) Low in adult role taking (Levin) Maximal self-aggression, boys (Sears)	Delinquency (Gluecks, Bandura and Walters) Noncompliance (Meyers) Maximal aggression (Sears)

<sup>a</sup>From Becker (1964).





warmth and permissiveness tend to produce independent, creative, and successfully aggressive (i.e., assertive, spontaneously expressive of angry feelings in a noncoercive fashion) children; parents who are high on hostility and restrictiveness tend to produce neurotic, shy, overly compliant, and maximally self-aggressive children; and parents who are high on hostility and high on permissiveness tend to produce noncompliant, maximally aggressive (in an antisocial manner) children. Inconsistency of discipline also seems to affect aggressive outcomes, in the direction of increased aggression.

Children who exhibit overly strong inhibition of aggression are thought to have experienced "child-rearing techniques that lead to the development of internalized norms, but include generalized prohibition of angry, self-assertive behavior on the part of the child, or expressions of independence" (Singer, 1971, p. 116). Singer implied that much more research was needed in this area because this type of inhibition seemed clinically related to violent crimes (viewed as displaced aggression), as well as to psychosomatic disorders like ulcers and essential hypertension. The studies discussed below are examples of such research.

The only parental influence not covered from Feshbach's chart (see Table 3) is the role of socialization of specific behaviors: weaning, toilet training, and independence training. Given the behavioral and stylistic approach to parenting strategies being addressed in this project, these behaviors are important inasmuch as they reflect permissiveness



and/or restrictiveness and they fit generally those trends outlined above.

It seems to be true also that parents have changed in their approach to these problems since World War II (Bronfenbrenner, 1958).

It is clear, then, that there are types of child-rearing that tend to result in varying aggressive responses. Of course, the findings are not clear-cut. Feshbach (1970) noted this reality graphically.

It is evident that a number of variables must be disentangled: the degree to which aggression is valued, ignored, or discouraged; the method by which aggression is assessed; the severity of punishment used; the frequency of punishment; the mode of punishment; the child's relationship to the punishing agent; the parental affection for the child; the sex of the child; the principal punitive agent and the consistency and pattern of punishment procedures employed by the parents; the range and type of aggressive behaviors for which particular punishments are administered; the normative punishments used in the subculture, and, to conclude without exhausting the list of relevant variables, the age at which punishment is administered. (pp. 227-228)

It is also true that, even if one considered all these variables, he would still be assuming constant behavior from the child, which is only theoretically useful. As noted at the outset of this discussion, the current state of our models of parent-child interactions have to be qualified to account for person-by-situation variations in their applications to real-world problems. As models for constructing such research or clinical aids, however, they are important constructs.

#### Are There Class and Race Differences in the Socialization of Aggression?

Given that there are certain differences in aggressive behavior that correlate with differences in socialization practices (although, as has been



noted, the models posited seem to minimize situational and individual difference variables), the evidence for class and racial differences will be examined below.

The available literature on class or race differences in the socialization of aggression suggested the following general theory (Bronfenbrenner, 1958; Kerckhoff, 1972; Kohn, 1963): Since World War II, there has been a shift in the socialization of aggression practices of lower class and middle class parents such that lower class parents are likely to be high on hostility and restrictiveness and middle class parents high on warmth and permissiveness. Lower class parents tend to use power-assertive discipline techniques and are more likely to model self-aggression and/or displaced aggression and to stress compliance and control, while middle class parents are more likely to use induction and love-oriented techniques and to model nonaggressive behavior. Lower class children, then, are expected to be overly compliant (which could mean they suppress aggression in a dysfunctional fashion or that they are passive-aggressive), while middle class children are more likely to be successfully aggressive (that is, assertive and spontaneous) or antisocial (that is, aggressive at other's expense).

The data used to draw these conclusions were based on white samples, except in one case (Kamii & Radin, 1967). Beginning prior to World War II, W. Allison Davis and associates (Davis, 1955; Davis & Dollard, 1940; Davis & Havighurst, 1946) examined socialization of





aggression practices by race and class. They found class differences between blacks and whites to be similar such that they concluded that middle class parents of both races were more restrictive and lower class parents more permissive. They found lower class children to be more likely to express aggression directly, as in physical forms, while middle class children were much more likely to express it indirectly, as in competitive activities.

Davis concluded that lower class people have fewer controls over their impulses and were therefore more angry and aggressive. In fact, he thought this spared lower class people "the feelings of incoherent rage and helplessness which result from the chronic suppression of aggressive impulses" (1940, p. 272).

Considering Davis' work in terms of Arnold Buss' conceptualizations, it becomes clear that the lower class children in his study were receiving instrumental reinforcement for physical displays of aggression. This suggests that they may not have been any more or less "angry" than middle class children; rather, the children were reinforced for different kinds of instrumental aggression--the lower class kids for physical aggression and the middle class kids for competitive behavior.

It does seem to follow from his work that lower class children were allowed to express angry aggression in its physical form. He noted in his 1940 study that hitting behavior, for example, was not seen as likely to be very serious by the lower class black children. It also might follow,





though, that middle class children expressed anger through competitive behavior. What is insufficiently addressed in Davis' work is the question: How did lower class children learn to handle aggression outside their immediate social context? It might be argued that they too inhibited angry aggression there.

Davis and Havighurst (1946) found middle and lower class blacks and whites to be alike except in practices regarding feeding, weaning, and toilet training. They reported that

middle class parents are more rigorous than lower-class parents in their training of children for feeding and cleanliness habits. They also expect their children to take responsibility for themselves earlier than lower-class parents do. Middle-class parents place their children under a stricter regimen, with more frustration of their impulses, than do lower-class parents. . . . [also] Negroes are more permissive than whites in the feeding and weaning of their children, but they are much more rigorous than whites in toilet-training. (p. 710)

As was noted earlier, differences in such behaviors are difficult to interpret in terms of aggressive behavior. What is most impressive in all of Davis' work is his concern for class and race variables. The shortcoming is in his lack of exploration of aggressive behaviors in various situational contexts. Given that weakness, and the changes since World War II, it is not possible to draw definitive conclusions from the evidence he presented.

Allinsmith's (1960) work suggested, as did Davis', that lower class children tended to express angry aggression more directly, but because their parents used "corporal discipline," not because of parental



permissiveness. She found that children of mothers who used psychological discipline tended to express anger more indirectly. Thus, one finds some conflicting evidence on the outcome of use of a power-assertiveness technique on a child's aggression expression. The problem here may be due, however, to definitions of direct versus indirect aggression as measured by story-telling (in this study) versus behavior.

Kamii and Radin (1967) found the same class differences for blacks as Bronfenbrenner (1958) noted in the white groups. They asserted that black lower and middle class parents had similar goals for their children, but that the socialization practices of middle class parents encouraged identification and internalization while lower class practices encouraged compliance. These authors classified techniques as unilateral or bilateral; these corresponded with the differences between use of love-oriented techniques and induction and the use of power-assertiveness techniques and expressive responses. The results of this study were also noteworthy because these authors intentionally used the observation method in data collection to take account of the criticism of the interview (or other self-report) method in almost all socialization studies.

The current available literature on differential socialization techniques did not speak to differences in socialization of aggression by race. Some limited support for differences in certain specific patterns of feeding and toilet training was available from Davis' work, but this is confounded by the hypothesized changes in patterns since World War II as



well as by the limited meaning one can infer from such a specific difference. One is led to conclude that to the extent that more blacks are in the lower class, there may be more use of power-assertiveness techniques and expressive responses by black parents, and thus there may be more compliance, self-aggression, and displaced aggression by black children. Translated into the terms of aggression defined earlier, this can be restated in a hypothesis which could be examined: Given the relatively higher incidence of lower class blacks, and given the types of socialization techniques most prominent in lower class populations, it can be asserted that black children are taught to inhibit expression of angry aggression through anxiety and fear (of authority), and are reinforced for instrumental aggression often in physical forms. Angry aggression may also be expressed as self-aggression (neurotic behavior, psychosomatic problems) or may be accumulated as hostility.

Such a hypothesis speaks to the incidence of inhibition of angry aggression and to the display of instrumental aggression correlated with race and class. It really does not, then, address the question of distinct differences. The data to this point on differences in forms of socialization practice just do not seem to offer an adequate answer.

#### Are There Race Differences? An Alternative Approach

Kohn (1963) suggested that class differences in socialization practices were due to different attitudes and values across classes resulting



from differential life styles. It follows, then, that differences in the way lower and middle class people perceive their environment lead to the kind of child-rearing practices they use. Teaching compliance, rather than the questioning of authority, for example, is functional if a parent is preparing his/her child to take a job working on an assembly line. Teaching a child to fight back when attacked is also functional in a community where one is likely to get hurt if one does not. It can be asserted that a similar issue is important when considering black/white differences in socialization of aggression; that is, it must be considered that black Americans might teach their children to respond differently than do white parents in relationship to white people. As noted previously, there was considerable anecdotal support for this assertion.

Davis (1940) intimated that being black was being part of a caste. Apparently certain types of norms and behaviors have been taught to maintain a caste (van den Berghe, 1967). Young (1971) also highlighted the caste-like status of American minority people and suggested three reactions: (a) avoidance of intergroup issues, (b) use of pressure to gain advantages, and (c) development of motivation and competence. The first reaction involves the inhibition of angry aggression and hostility.

An examination of works describing the black experience suggests that a major part of the socialization of black Americans has traditionally included this need to inhibit aggression and suppress hostility toward whites. Bertram Doyle (1937) outlined an etiquette of race relations used





in this century by blacks and whites which included graphic illustrations of how Negroes were socialized to inhibit their angry feelings from slavery on, by such subtleties as the way they had to address white people and the way they responded to being treated as inferior by whites. Hortense Powdermaker (1953) noted typical ways black people responded to their aggressive impulses in relation to whites. These included (a) attacking the instigator of the anger, (b) attacking a substitute object who posed less threat of counteraggression (i.e., another black), (c) ignoring the event and trying to avoid whites altogether (a fairly difficult task), (d) discharging hostility through wit and humor, (e) identifying with the aggressor and being hostile to blacks, and (f) identifying with the aggressor by being a "good nigger"--a nonaggressive, compliant, nice black person who treated whites with the utmost respect.

Powdermaker emphasized this last type as quite prominent. She wrote,

Neither the slave nor the obsequious, unaggressive Negro, . . . learned to play his role in any school. They learned by observation and imitation; they were taught by their parents; they observed what role brought rewards. Since the Civil War, the Negro has likewise seen the meek, humble type presented over and over again with approval in sermons, in literature. . . . By participating in cultural process, the Negro has learned his role. This was his education, far more powerful than anything restricted to schools; for the kind of education we are discussing is continuous during the entire life of the individual. It is subtle as well as direct. (p. 606)

Thus, Powdermaker described black socialization in the middle part of this century. She noted further that blacks were changing even then, but that "there are no sudden revolutions in behavior patterns, and this



holds for the patterns of aggression" (p. 607).

Grier and Cobbs (1969) also described the "good nigger":

Granting the limitations of stereotypes, we should nevertheless like to sketch a paradigmatic black man. His characteristics seem so connected to employment that we call it "the postal-clerk syndrome." This man is always described as "nice" by white people. In whatever integrated setting he works, he is the standard against whom other blacks are measured. . . . He is passive, nonassertive and non-aggressive. He has made a virtue of identification with the aggressor, and he has adopted an ingratiating and compliant manner. In public his thoughts and feelings are consciously shaped in the direction he thinks white people want them to be. The pattern begins in childhood when the mother may actually say: "You must be this way because this is the only way you will get along with Mr. Charlie."

This man renounces gratifications that are available to others. He assumes a deferential mask. He is always submissive. He must figure out "the man" but keep "the man" from deciphering him. He is prevalent in the middle and upper-middle classes, but is found throughout the social structure. The more closely allied to the white man, the more complete the picture becomes. He is a direct lineal descendant of the "house nigger" who was designed to identify totally with the white master. The danger he poses to himself and others is great, but only the surface of passivity and compliance is visible. The storm below is hidden. (pp. 55-56)

Such persons, according to Grier and Cobbs, were taught by the mother in a punitive fashion to crush defiant, aggressive urges toward whites. As quoted earlier, Baughman (1971) also noted that blacks understood that aggression toward whites needed to be eradicated. He reported the finding of a study he conducted in which black mothers whipped their children for aggressive behavior more than for any other reason. Also, relatively more black mothers whipped their children for aggression than whites. Again, a socialization process related exclusively to racial survival was apparent.

Andrew Billingsley (1968), whose work is generally well respected



by current black sociologists, noted that it was "becoming increasingly difficult for Negro parents to teach their children to hide hate and fear way inside" (p. 31). He highlighted the necessity of this suppression historically in black/white relations, and pointed out the parent's role in training that behavior.

Similar support may be found in numerous additional sources (see Pettigrew, 1964, and Goodman, 1964, for further examples). Two empirical studies done on the issue of formulation of racial attitudes which demonstrate the effects of race on socialization, though not addressing aggression specifically, will also be presented now.

Radke-Yarrow, Trager, and Miller (1952) studied the role of parents in the development of children's ethnic attitudes by interviewing 29 black and 70 white parents of lower-middle and lower income. They found that these parents' attitudes and beliefs did not support acceptance and understanding of intergroup diversity despite the fact that they were selected because their children were part of an experiment in intercultural education. The parents' attitudes suggested that they would, in fact, place restrictions on the social relationships of their children. This study demonstrated how black and white parents maintain values and therefore continue to socialize children to experience feelings and to behave differentially with regard to race. The content of interviews suggested that parents were maintaining hostility toward the outgroup--which from our definitions of aggression suggests that this can be passed on to





children. If they are not reeducated, then they too will adopt similar prejudices and hostilities.

Radin and Kamii (1965) reported another study which examined child-rearing attitudes of "disadvantaged" Negro mothers via a parental attitudes questionnaire. They concluded that these Negro mothers perceived a hostile world and a need to suppress their children's "internal impulses (sexual and aggressive)." They viewed this overprotective behavior by mothers as resulting in a lack of development of internal controls by their children. A problem with this study was the lack of empathy demonstrated for the survival value of suppression of impulses in relation to the white world. The authors ended up feeling sorry for these mothers and wanting to alter their "self-defeating child-rearing techniques" rather than considering how to change the environment such that it was not hostile. It does point out, however, the prevalence of the need to suppress children's impulses among black parents, even to the point that no aggressive behavior is viewed as acceptable.

Thus, numerous examples of what socialization to be black means have been offered. This is certainly a phenomenon within the black community which cuts across class lines. It seems that what this socialization involves is not a different child-rearing technique or a different form of behavior by blacks and whites, but different content relating to the object of aggression and/or in what circumstances. That is, punishment for aggression is more prominent in lower class blacks and whites, but





punishment for aggression toward whites seems to be a consciously communicated response by black parents of both classes, due to their role in the social structure. Bernard (1966) wrote,

To the extent that violence is a value among Negroes, it is not an aggressive violence, but, rather, defensive . . . vis-a-vis the white world, however, non-violence, nonretaliation, and infinite patience in the face of provocation were more likely to be the values which Negro parents attempted to inculcate in their children. (p. 143)

Grier and Cobbs (1968) noted that the postal clerk syndrome is seen largely in the middle and upper classes. Given the types of child-rearing practices most prominent there, then, it is likely that the content of the message within this class is communicated by way of induction and love-oriented techniques, just as other forms of discipline are handled. It might also be, though, that use of physical punishment for inappropriate behavior in the white world would be found within all classes in the black community. The content of the communication is clear; the form seems to be the same as used in all child-rearing practices for the socialization of aggression.

The protective or survival benefit of the outcome of this socialization to be black has been highlighted throughout this section. Baughman (1971) reported empirical evidence suggesting that black children perceived their environment as more threatening. He concluded,

While there is no evidence of innate differences in aggressive tendencies linked to racial membership, it is clear that socialization practices often have been directed toward the inhibition of aggression so as to produce the postal-clerk syndrome. Whites have a vested interest in this process since it has enabled them to exploit the blacks, while blacks have supported it because their very survival has seemed



to depend upon it. The result has been that black aggression in its most severe forms has been directed primarily against fellow blacks; there has been aggression against whites, of course, but usually this has been more subtle or indirect.

While black masses applaud (the need for assertiveness and even aggression in interracial behavior for the achievement of equality), it is extremely difficult for them to overthrow generations of tradition and actually act more assertively in interracial situations. This is particularly true because such behavior threatens a white majority that is capable of counteraggression. (pp. 63-64)

Baughman made two footnotes that are also important: (a) He shared Bernard's observations (1966, p. 107) that fewer blacks than whites have been exposed to child-rearing experts; and (b) he was aware of the findings that sometimes whipping behavior can lead to more aggression. As was discussed in the definition of aggression section, the latter result can theoretically be explained by an increase in non-problem-solving aggressive behaviors (self-aggression, passive aggression, and/or displaced aggression are examples).

### Summary

The preceding review examined evidence for racial differences in the socialization of aggression. Aggression was defined and the techniques for influencing its socialization in children were identified. Then class differences in socialization techniques were examined because the available literature suggests differential forms of socialization by middle and lower class parents. It appeared that, in form, black and white parents tend to use similar techniques depending on their class. Thus, lower class black and white parents, for example, seem to have changed from



being permissive (Davis, 1955) to being highly restrictive (Bronfenbrenner, 1958) in their punishment of aggressive behavior.

It was argued, then, that a racial difference in socialization of aggression would mean a difference in content of what is taught to black children in terms of how to respond to interracial situations. Historical sociological literature, primarily of the descriptive type, was presented to support the idea. It seems, then, that it is the content, not the form, of socialization of aggression that is important when identifying racial differences.

It also seems clear that, as black people become more assertive and as equality of opportunity becomes more a reality, the need for inhibition of aggression in racial encounters lessens. Yet, behaviors do not change overnight. It is reasonable to expect, therefore, that differences in the content of the socialization of aggression experience of blacks vis-a-vis whites in this country can be empirically demonstrated.

It is reasonable to expect differences in outcome also. Gentry (1972) found black males to inhibit aggression against verbal attack by a white experimenter. Kerckhoff (1972) also noted findings suggesting that black children repressed anger more than white children. Yet the literature on racial differences in aggression is scarce. Further, individual differences in aggression expression among blacks remain largely unexplored. There is also a need to explicate the interactions between individual differences in learned patterns of handling angry feelings and



the racial character of situations. The following investigation is a first step in filling some of these gaps by examining the relationships between self-reported shoulds and woulds about aggression expression and race-related behavior among blacks.

### Methods

#### Subjects

The SAQ was administered to 225 black females in four different settings. Each subject was asked to complete a questionnaire (see Appendix D) in exchange for a free blood pressure reading. One hundred and twenty-five questionnaires were gathered at two local shopping malls, 25 at a local church, 40 in the pediatric and orthopedic clinic waiting rooms at Duke Hospital, and 35 at a high school in a nearby city. All subjects were volunteers, ranging in age from 16 to 65.

#### Dependent Measures

##### Blood Pressure Measure

Sitting blood pressure readings were taken on all volunteers before they completed the SAQ. A standard blood pressure monitoring kit, composed of a pressure cuff, a stethoscope, and an aneroid gauge, was used.

##### Background Questionnaire

This instrument (see Appendix D) requested subject reports on age, marital status, blood pressure history, occupation, and education.





### Socialization of Aggression Questionnaire

Designed by the author, this instrument is an attempt to measure (a) subjects' and their parents' attributed attitudes about aggression expression, (b) their opinion about how they would behave in certain aggressive situations, and (c) how they think others should behave. The questionnaire addresses general socialization of aggression issues (how a parent should respond to feeling anger at a son or daughter, for example), as well as racial issues (how a child should respond to being called a "nigger" by a white person).

### Experimenters

Five white females and four black females served as experimenters in this study. Five were nurses, two were physician associate students, and two were psychology graduate students. All experimenters were proficient in using a blood pressure monitoring kit. Experimenters within each race condition worked for an approximately equal amount of time. However, it was found during data collection that black females were more willing to volunteer when the experimenter was black. Thus, an additional white experimenter was recruited to increase the number of questionnaires administered by whites.

### Procedure

Experimenters were set up in a visible place in all locations. Two signs were posted advertising free blood pressure checks, and one sign



requested black females to "help solve the problem of high blood pressure." Any person who requested a blood pressure reading was served. Each experimenter was instructed to explain that these blood pressures were being taken as part of a research project about black women. Black females were asked if they would complete the questionnaire after their blood pressure was taken. Each was then asked if she had ever been told that she had high blood pressure as the experimenter placed the blood pressure cuff on her arm. All volunteers were told their blood pressure reading and encouraged to get regular checkups. If a volunteer's blood pressure was high, he or she was encouraged to get another reading in a few days. Experimenters answered any questions the volunteers asked and/or encouraged them to consult with their physician.

During the sessions at local shopping malls, experimenters attempted to record as accurately as possible how many blood pressures they took of whites or black men. In addition, experimenters noted how many black women came by, stopped and read the signs, yet refused to participate in the study. Black women who walked away or said "no" when asked to participate by the experimenter were counted as refusals (see Appendix E, Table 1).

## Results

### Overview

The SAQ was an attempt to measure subjects' self-reported attitudes (shoulds) and their behaviors (woulds) about aggression expression; it



included items concerned with attributed parent attitudes on similar dimensions. The instrument was found to differentiate blood pressure groups on several individual items in a previous work (Batts, Note 1). Several hypotheses were tested with regard to the instrument:

1. Theoretically meaningful factors can be derived from individual SAQ items describing subjects' positions on various aspects of self-reported attitudes and behaviors regarding aggression expression.

It was expected that the following scales would be derived by factor analysis of the SAQ.

- a. Parental attitudes toward aggression expression.
- b. Parental attitudes toward interracial aggression expression.
- c. Respondent attitudes about socializing aggression in children.
- d. Respondent behavioral self-report for selected situations with friends.
- e. Respondent behavioral self-report for interracial situations and for selected situations with strangers.

2. The SAQ factors derived from the experimental sample used by Batts (Note 1) will be generally reproduced and further clarified in the survey data of Study I.

3. Subjects exposed to white experimenters will tend to report more support for anger expression on the SAQ than those exposed to a black.

4. High blood pressure subjects will tend to respond to the SAQ in a manner which suggests dysfunctional handling of angry feelings, either



by tending to suppress such feelings or by expressing them passively, relative to low blood pressure subjects. Conversely, subjects with normal blood pressures will tend to respond to the SAQ in a manner which indicates that they experience and express anger directly relative to the high blood pressure group.

5. The above trends will be further accentuated when the experimenter is white.

6. Subjects from all backgrounds are expected to tend to respond in similar ways to the SAQ. Younger subjects are expected, however, to respond more in the direction that "more anger is better."

In general, the results suggest that, as predicted, the SAQ items do form conceptually meaningful factors. Further, low blood pressure subjects tend to support direct aggression expression, while high blood pressure subjects tend to report more conflict about the appropriateness of such assertive and aggressive behaviors.

#### Description of the Socialization of Aggression Questionnaire (SAQ)

##### The Factor Structure of the SAQ

Principal component factor analyses with varimax rotation were performed, initially on the SAQ item responses obtained from the 64 females participating in the experimental study described above, and then on the same SAQ responses obtained from the 225 women in the survey sample.

The survey sample factors. Table 5 outlines the eight factors which





Table 5  
SAQ Survey-Derived Factors

Item	Factor loading
<b>Factor I. Self-reported inhibition of anger expression</b>	
SA17 When you get mad with a person of the same sex (a friend), you tell him or her directly.	-.61
SA18 When you get mad with a person of the same sex (a friend), you let him or her know indirectly or take it out on self somehow.	.75
SA19 When you get mad with a person of the same sex (a friend), you hold it inside.	.77
SA21 When you get mad with a person of the opposite sex (a friend), you tell him or her directly.	-.52
SA23 When you get mad with a person of the opposite sex (a friend), you let him or her know indirectly or take it out on self somehow.	.71
SA25 When you get mad with a person of the opposite sex (a friend), you hold it inside.	.75
SA34 When a stranger provokes you, you express your feelings.	-.30
<b>Factor II. Maternal exhortation against anger expression</b>	
SA1 I believe people would get along better if they were always nice to each other.	.51
SA4 My friends say I am happy most of the time.	.49



Table 5 (continued)

	Item	Factor loading
SA5	The world would be a better place to live if everyone were always nice to each other (what mother would have said when you were a child).	.59
SA7	Children should not get mad at their parents (what mother would have said).	.71
SA9	Parents should not get mad at their children (what mother would have said).	.72
Factor III. Endorsement of direct anger expression in close relationships regardless of sex		
SA17	When you get mad with a person of the same sex (a friend), you tell him or her directly.	.32
SA21	When you get mad with a person of the opposite sex (a friend), you tell him or her directly.	.49
SA27	When a person gets mad with his/her daughter, he/she should tell the child directly.	.82
SA30	When a person gets mad with his/her son, he/she should tell the child directly.	.85
Factor IV. Rejection of directness in anger expression to offspring		
SA26	When a person gets mad with his/her daughter, he/she should hold it inside.	.37
SA28	When a person gets mad with his/her daughter, he/she should let the child know indirectly.	.80
SA31	When a person gets mad with his/her son, he/she should let the child know indirectly.	.81



Table 5 (continued)

Item		Factor loading
Factor V. Endorsement of anger response to provocation by outsiders		
SA32	When a stranger provokes you, you feel angry.	.83
SA34	When a stranger provokes you, you express your feelings.	.50
SA36	When a white person provokes you, you feel angry.	.81
Factor VI. Comfort with anger expression--maternal identification		
SA1	I believe people would get along better if they were always nice to each other.	-.39
SA2	It is easy for me to watch two friends argue with each other.	.62
SA3	It is easy for me to watch two strangers argue with each other.	.70
SA5	The world would be a better place if everyone were always nice to each other (what mother would have said when you were a child).	-.32
SA13	If a white person calls a child a "nigger" the child should get mad and express his feelings (what mother would have said).	.58



Table 5 (continued)

Item	Factor loading
Factor VII. Attributed maternal encouragement of interracial aggression suppression	
SA11 If a white person calls a child a "nigger" the child should ignore it and forget it (what mother would have said when you were a child).	.82
SA13 If a white person calls a child a "nigger" the child should get mad and express his feelings (what mother would have said).	-.31
SA15 If a white person calls a child a "nigger" the child should understand that it is the white person's hang up and not get mad (what mother would have said).	.81
Factor VIII. Endorsement of inhibition of aggression	
SA26 When a person gets mad with his/her daughter, he/she should hold it inside.	.69
SA29 When a person gets mad with his/her son, he/she should hold it inside.	.65
SA34 When a stranger provokes you, you express your feelings.	-.35
SA38 When a white person provokes you, you express your feelings.	-.70





emerged. Table 6 compares them with the hypothesized theoretical conceptualization. As is illustrated in Table 6, six of the derived factors fit the theoretical schema of there being different woulds and shoulds dimensions. The remaining two scales, though including some items from each dimension (Table 5, Factors III and VIII), and thus not fitting the hypothesized schema, do make sense in terms of being relevant ways in which different blood pressure groups might differ regarding aggression expression. Factor III, endorsement of direct anger expression in close relationships regardless of sex, seems to suggest that subjects do not experience a difference in how they should respond to their children and how they report that they respond to friends. Examination of Factor VIII suggests, interestingly, that subjects who report that they respond to outsiders (strangers and whites) by holding anger inside also tend to believe that parents should hold anger at children inside. Again, there seems to be no conflict between what one does and what one feels parents should do in relation to their children.

The experimental sample factors. Table 7 outlines the factors derived from factor analysis of the SAQ responses of the 64 subjects in the laboratory experiment. Table 8 shows the relationships between the factors identified from the experimental data and those identified from the survey sample. As will be illustrated in the next section, application of the survey factor scores to the experimental data resulted in a substantial increase in the ability of the factors to predict the blood pressure groups in that study.



Table 6

## Comparing SAQ Empirical Factors and Theoretical Dimensions

<u>Theoretical dimensions (1-5)</u>	
<u>Shoulds</u>	1. Parental attitudes toward aggression expression Factor II. Maternal exhortation against anger expression Factor VI. Comfort with anger expression--maternal identification
	2. Parental attitudes toward interracial aggression expression Factor VII. Attributed maternal encouragement of interracial aggression suppression
	3. Respondents' attitudes about socializing aggression in children Factor IV. Rejection of indirectness in anger expression to offspring
<u>Woulds</u>	4. Respondents' behavioral self-report for selected situations with friends Factor I. Self-reported inhibition of anger expression
	5. Respondents' behavioral self-report for interracial situations and for selected situations with strangers Factor V. Endorsement of anger response to provocation by outsiders
<u>Combined shoulds and woulds</u>	
Factor III. Endorsement of direct anger expression in close relationships regardless of sex Theoretical dimensions: 3 and 4	
Factor VIII. Endorsement of inhibition of aggression Theoretical dimensions: 3 and 5	



Table 7

## SAQ Experiment-Derived Factors

Item		Factor loading
Factor I. Respondents' attitudes about socializing aggression expression in children		
SA5	The world would be a better place if everyone were always nice to each other (what mother would have said when you were a child).	.53
SA26	When a person gets mad with his/her daughter, he/she should hold it inside.	-.73
SA27	When a person gets mad with his/her daughter, he/she should tell the child directly.	.69
SA29	When a person gets mad with his/her son, he/she should hold it inside.	.80
SA30	When a person gets mad with his/her son, he/she should tell the child directly.	.74
Factor II. Respondents' self-reported overt aggression expression		
SA4	My friends say I am happy most of the time.	.48
SA17	When you get mad with a person of the same sex (a friend), you tell him or her directly.	.73
SA18	When you get mad with a person of the same sex (a friend), you let him or her know indirectly or take it out on self somehow.	-.45
SA19	When you get mad with a person of the same sex (a friend), you hold it inside.	-.70



Table 7 (continued)

	Item	Factor loading
SA21	When you get mad with a person of the opposite sex (a friend), you tell him or her directly.	.62
SA25	When you get mad with a person of the opposite sex (a friend), you hold it inside.	-.38
SA27	When a person gets mad with his/her daughter, he/she should tell the child directly.	.38
SA30	When a person gets mad with his/her son, he/she should tell the child directly.	.33
SA38	When a white person provokes you, you express your feelings.	.43
Factor III. Respondents' self-reported discomfort with aggression expression		
SA1	I believe people would get along better if they were always nice to each other.	.66
SA2	It is easy for me to watch two friends argue with each other.	-.68
SA3	It is easy for me to watch two strangers argue with each other.	-.37
SA4	My friends say I am happy most of the time.	.55
SA5	The world would be a better place if everyone were always nice to each other (what mother would have said).	.31
SA25	When you get mad with a person of the opposite sex (a friend), you hold it inside.	.50
SA36	When a white person provokes you, you feel angry.	.53





Table 7 (continued)

Item		Factor loading
Factor IV. Maternal attitudes about aggression expression		
SA1	I believe people would get along better if they were always nice to each other.	.39
SA3	It is easy for me to watch two strangers argue with each other.	.44
SA5	The world would be a better place if everyone were always nice to each other (what mother would have said).	.46
SA7	Children should not get mad at their parents (what mother would have said).	.80
SA9	Parents should not get mad at their children (what mother would have said).	.70
SA38	When a white person provokes you, you express your feelings.	.41
Factor V. Maternal attitudes about interracial aggression expression		
SA11	If a white person calls a child a "nigger" the child should ignore and forget it (what mother would have said).	-.77
SA13	If a white person calls a child a "nigger" the child should get mad and express his feelings (what mother would have said).	.75
SA15	If a white person calls a child a "nigger" the child should understand that it is the white person's hang up and not get mad (what mother would have said).	-.64
SA36	When a white person provokes you, you feel angry.	.36



Table 7 (continued)

Item	Factor loading
Factor VI. Respondents' attitudes toward covert expression of aggression in socialization of children vs. their self-reported behavior	
SA18 When you get mad with a person of the same sex (a friend), you let him or her know indirectly or take it out on self somehow.	.39
SA28 When a person gets mad with his/her daughter, he/she should let the child know indirectly.	.87
SA30 When a person gets mad with his/her son, he/she should tell the child directly.	-.30
SA31 When a person gets mad with his/her son, he/she should let the child know indirectly.	.82
SA36 When a white person provokes you, you feel angry.	-.36
SA38 When a white person provokes you, you express your feelings.	-.34



Table 8

## Comparing SAQ Experimental Factors with Survey Factors

Survey factors	Experimental factors
Factor I. Self-reported inhibition of anger expression	Factor II. Respondents' self-reported overt aggression expression
Factor II. Maternal exhortation against anger expression	Factor IV. Maternal attitudes about aggression expression
Factor III. Endorsement of direct anger expression in close relationships regardless of sex	Factor II.
Factor IV. Rejection of directness in anger expression	Factor VI. Respondents' attitudes towards covert expressions of aggression in socialization of children
Factor V. Endorsement of anger response to provocation by outsiders	
Factor VI. Comfort with anger expression--maternal identification	Factor III. Respondents' self-reported discomfort with aggression expression
Factor VII. Attributed maternal encouragement of interracial aggression suppression	Factor V. Maternal attitudes about interracial aggression expression
Factor VIII. Endorsement of inhibition of aggression	Factor I. Respondents' attitudes about socializing aggression expression in children



Examination of Table 8 shows that all six factors reappeared in the survey data. In all cases, three to four items were similar. In one case (Factor II), an experimental factor with a relatively large number of items with strong loadings became two factors in the survey data. And generally items that dropped out of the experimental factors made them more clear. When new items clustered with those from the experiment, they also usually made the survey factor more meaningful. Given the larger sample, and the increased clarity possible from that sample, additional support was available for using the factors derived from the survey sample to reinterpret the experimental data. In Study II, the results of analyses using such a procedure will be presented.

#### The SAQ's Relationship to Background Variables

Multiple regression analyses were performed to explore the relationship between the background variables, age, marital status, occupation, and education, and the factor scores. Together the background variables predicted a small but significant proportion of the variance (3 to 7%) in each of the factors. Occupational status was the only background variable which by itself predicted a significant proportion of the variance (2 to 4%).

The first two hypotheses of this investigation, as listed above, then, have been confirmed. Subjects' responses to the SAQ, on two administrations, fit with a theoretical conception of how items would cluster together, as predicted in Hypothesis 1. Further, consistent with Hypothesis 2, these factors were largely stable across two administrations of the instrument.





## Relationship Between the SAQ and Blood Pressure Groups

Given the SAQ factors described above, the next task was to see how well and in what ways they distinguished the high and low blood pressure groups. Discriminant function analyses were conducted using SAQ factor scores to predict blood pressure groups. A series of multiple regression analyses then examined the relative predictive utility of SAQ factors and background variables for blood pressure groups. Finally, analyses of variance and covariance were employed to explore the effects of blood pressure group, race of experimenter, and age on responses to each of the SAQ factors.

### Discrimination of Blood Pressure Groups with the SAQ

Discriminant function analyses were performed in order to examine the ability of the SAQ factors to distinguish between blood pressure groups. Table 9 illustrates that a function of the factors correctly classified 62.69% of the low blood pressure group and 81.93% of the high blood pressure group in the survey sample.

Next the factor loadings derived in the survey sample were applied to the data from the experimental sample. As noted above, a discriminant function analysis was used to see if the eight survey factors classified the blood pressure groups more accurately than the six factors derived from the experimental sample. As is apparent from examination of Table 10, there is a 22.23% increase in the number of high blood pressure subjects



Table 9

Discriminant Function Analysis on Factor  
Scores from Survey Data

Number of observations and percentages classified into HBP			
SAQ	Lo	Hi	Total
Hi	15 18.07	68 81.93	83 100.00
Lo	42 62.69	25 37.31	67 100.00
Total percent	57 38.00	93 62.00	150 100.00



Table 10

Comparing Discriminant Function Analyses of  
Experimental Group Using Experimental  
Factors and Survey Factors<sup>a</sup>

Number of observations and percentages classified into BP						
SAQ	Experimental factors			Survey factors		
	Hi	Lo	Total	Hi	Lo	Total
Hi	17 62.96	10 37.04	27 100.00	23 85.19	4 14.81	27 100.00
Lo	4 14.29	24 85.71	28 100.00	2 7.14	26 92.86	28 100.00
Total percent	21 38.18	34 61.82	55 100.00	25 45.45	30 54.55	55 100.00

<sup>a</sup>Note that 9 subjects were dropped from this analysis due to missing values.



correctly classified, and a 7.15% increase in the number of lows accurately placed.

It is clear, then, that the survey-derived factors are superior predictors of blood pressure group in the experimental sample. From this point on, they will be used to discuss any significant relations among factors, blood pressure group, experimenter effects, and behaviors in both the current report of the survey results and in the report of the results of the experimental data analyses to follow. Further consideration of the experimental data set will be postponed until the second Results section.

#### Relationships Between SAQ Factors Within Blood Pressure Groups

Interestingly, the correlations between survey SAQ factors are different for the high and low blood pressure groups, thus indicating an unpooled covariance matrix in the discriminant function analysis (see Table 11). Forcing the pooling of the matrices results in a somewhat lowered, though still impressive, classification of groups (65.63% of highs correctly placed and 71.88% of lows in the survey sample). Because it makes sense conceptually, given the hypotheses of this investigation that high and low blood pressure subjects might respond in significantly different ways, this difference in correlations is an important finding.

Table 11 shows the significant differences in the correlation matrices for the two survey blood pressure groups. Each correlation was converted





Table 11

Correlations Between Factors for Survey Data<sup>a</sup>

Factors	Hi							
	I	II	III	IV	V	VI	VII	VIII
I	1.00	<u>-.03</u>	-.45***	.42***	-.31***	<u>.10</u>	-.19	.67***
II		1.00	<u>.46***</u>	<u>.07</u>	<u>.29**</u>	-.14	<u>.54***</u>	<u>.03</u>
III			1.00	-.19	<u>.55***</u>	-.19	<u>.40***</u>	-.58***
IV				1.00	<u>.05</u>	<u>.39***</u>	<u>-.17</u>	<u>.44***</u>
V					1.00	.11	<u>.02</u>	-.36***
VI						1.00	<u>-.46***</u>	<u>.04</u>
VII							1.00	-.09
VIII								1.00

Factors	Lo							
	I	II	III	IV	V	VI	VII	VIII
I	1.00	<u>.28**</u>	-.51***	.49***	-.24**	<u>.33***</u>	-.09	.61***
II		1.00	<u>.24**</u>	<u>.39***</u>	<u>.08</u>	-.15	<u>.36***</u>	<u>.30***</u>
III			1.00	-.30***	<u>.47***</u>	-.30***	<u>.34***</u>	-.39***
IV				1.00	<u>-.26**</u>	<u>.28**</u>	<u>-.03</u>	<u>.43***</u>
V					1.00	-.11	-.03	<u>-.11</u>
VI						1.00	<u>-.19</u>	.14
VII							1.00	.06
VIII								1.00

<sup>a</sup>Underlined correlations represent instances in which significant differences ( $p < .05$ ) between blood pressure groups were obtained.

\* $p < .10$ .

\*\* $p < .05$ .

\*\*\* $p < .01$ .



to a Fisher Z and differences between blood pressure groups were examined using t tests. Examination of those correlations which differed significantly reveals a consistent tendency for high blood pressure subjects to report conflict between self-reported expression and belief in suppression of anger. Thus, Factor I and Factor II, a behavioral support for anger suppression factor and an attitudes against anger expression factor, respectively, were unrelated for high blood pressure subjects but significantly positively correlated for low blood pressure subjects. Similarly, Factors II and V are related more in high blood pressure than low blood pressure subjects. This suggests that high blood pressure subjects who reported more belief in suppression of aggression also reported that they would get angrier at outsiders.

Additional support for this claim can be found by examining the relationships between Factor IV and Factor V. While there was a significant negative correlation between "rejection of directness in anger expression to offspring" and "endorsement of anger response to provocation by offspring" in low blood pressure subjects, no such correlation was obtained for high blood pressure subjects. By contrast, Factors II and III were more highly related for high than low blood pressure subjects. Thus, high blood pressure subjects showed a larger positive correlation between "maternal exhortation against anger expression" and "endorsement of direct anger expression in close relationships regardless of sex." All of the other blood pressure group differences displayed in Table 11 were



consistent with this more conflicted pattern of response among high blood pressure rather than low blood pressure subjects.<sup>1</sup>

### Prediction of Blood Pressure Groups with the SAQ and Other Variables

Multiple regression analyses were performed to explore the relationships between factor scores, background variables, and the interactions of race of experimenter with SAQ factors and blood pressure groups. Table 12 shows the variance accounted for by each of these groups of variables given different orders of entry into the regression equations. Note first that the variance accounted for by the factors is relatively stable in all three instances (factors entered first, background variables entered first, and interactions entered first), at an average of 10.66%. The variance accounted for by the background variables fluctuates considerably more, from 5% to 9% and then to 1% in the three orders of entry. This suggests that some of the factor-related variance in the blood pressure groups is shared by these background variables.

Examination of the variance accounted for by the individual variables was also possible. When they were entered first, occupation and education

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<sup>1</sup>Examination of Table 11 also revealed two instances in which the high blood pressure subjects show greater relationships between SAQ should dimensions than low blood pressure subjects. Thus, Factors II and VII had greater positive correlations for high blood pressure subjects relative to lows, indicating that those more likely to report "maternal exhortation against anger expression" were also more likely to attribute maternal encouragement of interracial aggression suppression. A similar pattern is revealed by the stronger negative correlation between Factors VI and VII among high blood pressure relative to low blood pressure subjects.



Table 12

Multiple Regression Analysis; Blood Pressure Predicted  
by Factors, Race of Experimenter by Factors  
Interaction, and Background Variables<sup>a</sup>

	Factors entered first	Background variables entered first	Factors x RE first
<u>Factors</u>			
I			
II			
III			
IV			
V			
VI			
VII			
VIII	.12	.09	.11
<u>RE x Factors</u>			.08
<u>Background variables</u>			
Age			
MS			
OC 1-6			
Ed	.05	.09	.01
<u>Total R<sup>2</sup></u>	.17	.18	.20
Total R	.41	.42	.45
n <sup>b</sup>	150	150	150

<sup>a</sup>The analyses were hierarchical multiple regressions. The latter entries in each column indicate the increment in  $R^2$  added by inclusion of these independent variables.

<sup>b</sup>Seventy-five observations were deleted due to missing values. Replacing missing values with means did not alter the outcome significantly.





were significant by themselves in predicting the blood pressure groups, thus increasing the overall significance of the background variable categories. Across all three orders of entry, Factors VI and VIII were independently significant factors in predicting the blood pressure groups.

Consistent with the prediction that the race of the experimenter would influence the responses of survey subjects, the interactions of race of experimenter and factor scores accounted for a significant proportion of the variance in blood pressure group (8%) in the survey data.

#### The Effects of Blood Pressure Group and Experimenter's Race on the SAQ

The final step in examining the hypotheses made regarding the survey data was to look at whether or not the blood pressure groups differed in their responses to factors and in what ways. It was also necessary to see if and how the race of the experimenter would affect these differences. Table 13 shows the significant effects on four factors (I, V, VI, and VIII) and marginally significant effects on two factors (III and VIII). The effects are diagramed in Appendix F (Tables 1-5, Figures 1-5). As is clear from an examination of these diagrams, all main effects and all interactions are in the same direction: The high blood pressure subjects, and particularly when exposed to a white experimenter, reported that more suppression of aggression was preferable, while the low blood pressure subjects, and particularly when exposed to a white experimenter, reported that more expression of angry emotions was preferable (see diagram of Factors I, III, V, and VIII, Appendix F). This is consistent with the



Table 13

## Summary of Analyses of Variance on Survey Factors

Factors		Overall means	Significant effects	Marginal effects
I	Self-reported inhibition of anger expression	0	HBP (.01) HBP x RE (.01)	none
II	Maternal exhortation against anger expression	0	none	none
III	Endorsement of direct anger expression in close relationships regardless of sex	0	none	HBP x RE (.07)
IV	Rejection of directness in anger expression to offspring	0	none	none
V	Endorsement of anger response to provocation by outsiders	0	HBP x RE (.05)	none
VI	Comfort with anger expression--maternal identification	0	HBP (.01)	none
VII	Attributed maternal encouragement of interracial aggression suppression	0	none	none
VIII	Endorsement of inhibition of aggression	0	HBP (.03)	HBP x RE (.09)



hypothesis that high blood pressure subjects would report a preference for suppression of anger and the lows would prefer expression of anger. It also supports the hypothesis that this trend would be more apparent when the subjects were exposed to a white experimenter.

Turning now to the implications of these data for Hypothesis 4, examination of the significant main effects on Factors I, VI, and VIII support the prediction that highs would report suppression or covert expression of angry feelings as more appropriate, relative to the low blood pressure group. Subjects' responses to Factor VI, "Comfort with anger expression--maternal identification," are particularly interesting. This factor pulls for internalized values about how one should behave. Note that the high blood pressure subjects tended to report that they should be comfortable with expressing angry feelings, while the low blood pressure subjects reported less value on being comfortable with that. Given that the high blood pressure subjects reported that they actually would suppress more, this might represent the classic conflict hypothesized in the literature between the unconscious desire to express anger and the conscious need not to do so. Reexamination of the results of the experimental data, where behavioral measures are available, will be necessary to evaluate this interpretation. In that case, the relationship between subjects' responses on Factor VI can be compared not only with self-reported behavioral responses (as is true in this sample), but also with measures of behavioral aggression.



### The Effects of Blood Pressure Groups and Subject's Age on the SAQ

Another hypothesis tested in regard to the survey sample was that subjects from all backgrounds would tend to score similarly on the SAQ, except that younger subjects would perhaps report a greater commitment to overt anger expression. It was thus expected that age would correlate with the relationship between blood pressure groups and SAQ factor scores. Analyses of covariance on each factor using blood pressure groups as the independent variable and age as the covariant were then performed. Age was used as a continuous variable. It was found to be a significant covariate on Factor VI only ( $p < .03$ ). The main effect for blood pressure group was also still significant ( $p < .003$ ). The direction of the means (lo,  $-.51$ ; hi,  $+.41$ ) indicates that younger subjects tended to put less value on the need to be comfortable with aggression expression, and that in both the younger and older groups the low blood pressure subjects differed from the high blood pressure subjects in reporting less endorsement of the appropriateness of comfort with such expression.

### Description of Black Female Behavioral Responses to Survey Administrations

As noted in the Methods, black and white experimenters were alternated over several days at two local malls to conduct blood pressure screenings. Experimenters were asked to note as accurately as possible how many blood pressures they took of whites and of black males. They were also asked to make an estimate of how many black females who





walked by and noticed the screening chose not to participate. (In many cases, the experimenter actually asked the prospective subject if she would be willing to participate.) Although the estimates are quite rough, since the experimenter's first priority was to take blood pressures and administer the questionnaire, the results are interesting in light of the other survey findings. Of course, an independent observer whose only task was to count subjects would be needed to confirm the trends evidenced.

### The Interracial Situation

Appendix E, Table 1, shows that approximately 39% of the black females who walked by agreed to participate when there was a black female experimenter present. By contrast, only approximately 18% agreed to participate when a white female was the tester. This difference in willingness to participate was evident throughout the data collection phase, where more hours were required to collect enough questionnaires administered by white than black experimenters. Since some of the experimenters were unable to keep track of potential participants along with their other duties, only the data collected on these issues by three white and two black experimenters are reported above.

An interesting encounter between one subject, a white experimenter (TC), and the principal investigator (VB) is perhaps worth viewing as a clue to the differences noted. The encounter was described as follows by the experimenter, TC, just after it occurred.



Conversation at Northgate Mall, 8:30 p.m., 4/11/80:

Two black women (approximate age: late 20's for one; early to mid-20's for the other) approached TC tentatively. TC asked if they wanted their blood pressure taken, free; and they asked why it was being done. TC said, "It's for research." One woman said, "Oh, everything's research these days," and TC said, "Yeah, but this is aimed specifically at people like you." "You mean black people?" she said. TC replied, "Black women," and the other woman went off to fill out her questionnaire. (TC had asked them to complete it as part of the opening pitch.) The questioner remained, undecided, and VB came up. As TC and VB greeted each other, the questioner said, "Whose research is this?" and when VB said, "Mine," there were no further questions; the woman took a questionnaire aside to fill out, saying, "Fine." (TC earlier had said just that it would "help out a friend of mine who's doing her dissertation research.")

What is interesting about this encounter is that the black female's suspicion of white people doing research was very clear and direct. She was visibly relieved and very willing to participate when the principal investigator was identified as a black female, much like herself.

When discussing this incident with several other experimenters, it was found that most of them had also had the experience that blacks were generally less willing to participate in such blood pressure screenings than whites, and particularly when all those taking the blood pressure readings were white. This information suggests that racial factors may play an important part even in terms of influencing who will get their blood pressure examined.

#### Behavioral Responses and SAQ Reports

Analyses of variance of high and low blood pressure subjects focusing on responses after exposure to a black experimenter also support this



claim (see Appendix F, Tables 1-5). The diagrams suggest that the interactions between race of experimenter and blood pressure group found on Factors I, III, V, and VIII are due mostly to the difference in subjects' responses to a white, not a black, experimenter. Duncan simple effects analyses were performed on these factors. The results suggest that in all but one case the blood pressure groups do not differ significantly in their response to a black, though they often differ in response to whites. Thus, on Factor VI, "Comfort with anger expression--maternal identification," high blood pressure subjects across both race conditions reported high scores relative to low blood pressure subjects; while on Factors I, III, V, and VIII, all behavioral self-report relevant factors, all subjects exposed to blacks tended not to differ. This result suggests that the blood pressure groups differed less in the intraracial situation.

In only one case, Factor I, did the Duncan procedure reveal a simple effect of blood pressure within race of experimenter groups consistent with this interpretation. On this factor, high and low blood pressure groups do not differ significantly in the presence of a black experimenter, yet they do differ in the presence of a white. Thus, in the presence of a white, high blood pressure subjects report greater self-reported inhibition of anger expression than lows. Further, low blood pressure subjects exposed to a white experimenter reported a lower level of such inhibition than any other group.

In the other cases where significant blood pressure group by race



of experimenter interactions were obtained, the Duncan procedure did not reveal any single comparison between means as the source of the interaction, though visual inspection of the tables does support the trends revealed for Factor I.

### Summary

Reviewing the hypotheses outlined at the beginning of this section, the following conclusions can be drawn:

1. Theoretically consistent factors were derived from individual SAQ items which differentiated subjects' beliefs about what they were taught and what they should do in aggressive situations, their beliefs about what they should teach their children, and their self-reports of how they would behave in such situations.
2. The SAQ factors derived by factor analysis from an experimental sample of 64 black females were generally reproduced and further clarified in a survey administration ( $n = 225$ ).
3. It was hypothesized that all subjects exposed to a white experimenter would tend to respond in the direction of "more anger is better," relative to subjects exposed to a black experimenter. This conjecture was not confirmed across all subjects, as there were no main effects for race. It did hold, however, for the low blood pressure group.
4. High blood pressure subjects tended to respond to the SAQ in a manner that reflected dysfunctional handling of angry feelings. They reported more suppression or covert expression (i.e., passive aggression)





along with a greater value on being comfortable with direct expression. It was suggested that the results imply a conflict between wanting to express anger and feeling compelled not to do so. Low blood pressure subjects, conversely, tended to respond to the SAQ in a manner which indicated that they experience and express anger more directly relative to the high blood pressure group, even though they place less value on being comfortable with such expression.

5. As hypothesized, the above trends were further accentuated when the experimenter was white.

6. Subjects from all backgrounds tended to respond in similar ways to the SAQ, as was predicted. Background variables accounted for only a small percentage of the variance in SAQ factor scores. It was also expected that subject's age would moderate the relationship between blood pressure group and SAQ responses. This result was only obtained in one case where younger subjects within both blood pressure groups tended to report less support for the appropriateness of being comfortable with anger expression. The groups did not differ by age in self-reported behavior, however. Further, independent of age, low blood pressure subjects gave less support for Factor VI, "Comfort with anger expression--maternal identification," than high blood pressure subjects.



## CHAPTER III

### STUDY II

#### Introduction

##### Overview

The study presented above addressed how black females have learned to deal with anger in interracial and intraracial situations as a function of blood pressure group and demographic variables. In the pages to follow, a second question is examined: How do black female college students with higher blood pressures differ from those with lower blood pressures in anger expression in interracial and intraracial situations?

##### Summary of Literature

A review of the literature of differences in aggressive behavior among hypertensives versus normotensives not distinguished by race or sex (see Batts, Note 1) resulted in several conclusions discussed below.

Much clinical evidence exists which supports the hypothesis that suppressed aggression is an intrapsychic dynamic in essential hypertension (Alexander, 1939; Buss, 1961; Dunbar, 1948; Fischer, 1961; Hambling, 1951, 1952; Hill, 1935; Moses, Daniels, & Nickerson, 1956;



Thomas, 1963, 1967; Weiss, 1939). Although these investigations were described primarily in terms of psychoanalytic theory with little concern for a readily observable behavioral definition of aggression, they appear to suggest that among hypertensives there was a noticeable conflict between expressing feelings of anger and appearing overtly compliant, gentle, and kind.

Attempts to test this hypothesis using psychiatric interviews of small samples, standard psychological tests, and/or laboratory stimulus situations are contradictory at best. Studies by Miller (1939), Saul, Sheppard, Shelby, Lharmon, Sachs, and Master (1954), Saul and Sheppard (1956), Kaplan (1961), and Esler, Julius, Zweifler, Randall, Harburg, Gardiner, and DeQuattro (1977) clearly support the suppressed aggression hypothesis. Matarazzo (1954) and Pilowsky et al. (1973) found definite differences in blood pressure groups which tended to support the hypothesis, but results were inconsistent across measures. This may reflect inadequacies of these measures.

Osfeld and Lebovits (1959, 1960) and Osfeld and Shekelle (1967) did not find support for the suppressed aggression hypothesis, so these workers considered abandoning traditional psychologic measures in favor of measures of individuals' responses to daily life stressors. In effect, they advocated a situation by personality interaction hypothesis. This hypothesis, as noted previously, appears to be the most likely approach to actually making new discoveries in this field.



It is clear from all these investigations that a variety of psychological stimuli will cause blood pressure rises in some cases. Examination of those few studies which compare actual behaviors of hypertensives and normotensives and/or investigations of real-world experiences of these two groups did indeed reveal differences in behavioral expression of aggression in various interpersonal situations (Cohen, 1963; Gambaro & Rabin, 1969; Gentry, Harburg, & Havenstein, 1973; Harburg et al., 1973; Harris et al., 1953; Hokanson & Burgess, 1962a, 1962b; Hokanson & Shetler, 1961; Kalis et al., 1957; Matarazzo, 1954; Saslow et al., 1950; Schachter, 1957; Shapiro, 1961; Wolf & Wolff, 1951). In most of these instances, as will be described below, the results confirmed the hypothesis that hypertensives express less overt anger in various interpersonal situations relative to normotensives (or conversely, that they inhibit aggression more). In the few cases where conflicting evidence was cited (Kalis et al., 1957; Schachter, 1957; Shapiro, 1961), it did not disconfirm the hypothesis. Rather, the evidence suggested other ways that blood pressure groups might differ. These findings underscore the need for more complex research methodologies that take a larger range of situations into account, while simultaneously defining dysfunctional aggressive behavior in broader terms.

The evidence clearly suggests, then, that research must combine sociological and psychological factors such that investigation of behavioral differences in hypertensives and normals takes into account specific and





nonspecific stress reactions. "Suppressed aggression" alone, as defined by the original psychoanalytic investigators, is seemingly a clinical, consulting-room dynamic which does not hold up to "real-world" empirical test. When considered as part of an interpersonal or psychosocial hypothesis (i.e., a black person's characteristic response to discrimination; a rural person's response to his children leaving home because of lack of opportunity, etc.) the evidence becomes more convincing.

#### Summary of Review of Ecologically Valid Studies

An extensive review of the ecologically valid investigations of the role of suppressed aggression in essential hypertension, listed above, is provided in Batts (Note 1). Studies were considered by Saslow, Gressel, Shobe, Dubois, and Schroeder (1950), Wolf et al. (1948, 1951), Harris et al. (1953), Matarazzo (1954), Kalis et al. (1957), Schachter (1957), Hokanson and Shelter (1961), Shapiro (1961), Hokanson and Burgess (1962a, 1962b), Hokanson and Cohen (1963), Gambaro and Rabin (1969), Gentry (1973), and Harburg et al. (1973). A summary of the approaches used, results obtained, and general problems encountered in these studies is presented below.

Hokanson and colleagues, Gambaro and Rabin, Shapiro, Schachter, and Matarazzo all used experimentally manipulated attacks in their investigations, ranging from verbal attacks to cold pressor tests. All except Shapiro found support for the suppressed aggression hypothesis and/or for the hypothesis that hypertensives do not express anger



effectively. Saslow et al., Harris et al., Kalis et al., and Wolf and Wolff used a variety of behavioral ratings of interview situations. Wolf and Wolff's work was particularly striking in its longitudinal approach. These investigations also supported the hypothesis above. Shapiro, Kalis et al., and Wolf et al. further provided support for a more general hypothesis that hypertensives react more than normals to all negative stimuli.

Work by Harris and Kalis using emotion-provoking psychodramas also supported the claim that hypertensives handle anger less appropriately than normals. Finally, investigations by Harburg et al. and Gentry revealed, through use of ecologically valid surveys of a representative community sample, that high stress, high blood pressure subjects tend to report more suppressed aggression. Their use of actual hypertensives and black male and female samples is quite impressive. Kalis, Matarazzo, Shapiro, Saslow, and Wolf and Wolff also used diagnosed hypertensives. By contrast, a problem with the other investigations was that they did not use such samples, thus leaving unresolved whether or not the results would actually hold for "real" hypertensives.

Hokanson and colleagues' and Gambaro and Rabin's work also suffered because they only examined acute blood pressure rises in a laboratory setting. To assume that their results are true of hypertensives in general is to accept as fact the hypothesis that continued unexpressed frustration and aggression leads to chronic blood pressure rises.



A major strength in all of these studies was the investigators' explicit concern for behavioral definitions and measurements. It is interesting to note that most of them supported the suppressed aggression hypothesis, while several added support for the assertion that dysfunctional handling of anger is a significant dynamic. Apparently contradictory evidence suggested, further, that even in cases where a specific conflict between aggression suppression and expression was not found, evidence for the role of nonspecific psychological stress in essential hypertension was indicated.

As has been noted throughout the current investigation, the problem with most of the work done to date in the psychosomatic literature is that etiology has not been demonstrated, though it has often been implied or assumed. Yet, this faulty reasoning is not really difficult to understand. It is clear that most of the investigators who look at the question of how aggression relates to essential hypertension are following intuitive and clinical observations that suppressed aggression brought on by an individual's psychosocial situation is part of the etiology of essential hypertension in genetically predisposed persons. The variety of research approaches examined above illustrates once again that the problem for most investigators has been how to demonstrate the hypothesis empirically.

#### Rationale for the Present Study

The problem with most of the work done in the investigation of psychological correlates of hypertension seems to be a problem of



methodology. When investigators have tried to measure a personality construct of aggression, results have been contradictory. When people have looked at aggression in behavioral terms, results have been more promising. Matarazzo (1954), for example, was concerned with measuring "real-world" behavioral aggression. He found compliant behaviors (suggesting suppressed aggression) among hypertensive subjects as they continued to participate in an aggression-provoking situation when normotensives refused. Harburg et al. (1973) also found a relationship between suppressed aggression and high blood pressure among subjects in Detroit who were asked in interviews to respond to real-world behavioral aggression-provoking situations: housing discrimination and police attack.

The conclusion reached again and again in the literature is that long-term prospective studies are needed. In addition, studies of families in the natural setting which note observable behaviors, attitudes, and parenting styles, as well as physiological variables, seem highly indicated. Even self-report data about family socialization of aggression is seriously lacking. It is essential to use behavioral definitions of aggression and to note variations in aggressive responses by race to different situations.

The present study is an attempt to look at some of these unexplored areas using interpersonal and behavioral measures of aggression. The study is also significant in that it examines aggressive behaviors within a black female population. It represents only the second recorded attempt to look at this particular segment of the population, the first being Gentry (1972, 1973).





## Methods

### Overview

In Batts' (Note 1) study, 64 black female undergraduates were recruited from a local, predominantly black university. In an initial screening session, subjects were selected on the basis of a blood pressure measure and divided into low and high blood pressure groups, the criteria being a current blood pressure of 130/80 on either diastolic pressure, systolic pressure or both and /or a history of high blood pressure. Subjects came to the lab for individual sessions. Blood pressure was measured again by the author. Each subject was interviewed by a second experimenter who was either black or white, and either male or female. The interview consisted of the administration of 10 Thematic Apperception Test cards. The first group of 5 cards were administered in the standard fashion, while the answers to each card in the second group of 5 were responded to by the interviewer with standardized criticisms. After the interview, each subject was fully debriefed and asked to complete two self-report questionnaires. After each subject left, the interviewers completed two behavioral assessment questionnaires.

In the current study, the following six dependent measures from the experiment were examined: blood pressure changes, fantasy aggression as measured by the number of aggressive words and the number of negatives, verbal output (length of TAT stories), situational affective responses (rated from audio tapes of the TAT interviews), debriefing verbal



responses, and subjects' factor scores as derived in Study I.

### Dependent Measures

#### Blood Pressure Changes

The magnitudes of the changes in blood pressure as a function of experimental group membership before and after anger provocation were compared using analysis of variance with time of measurement as a within-subjects factor.

#### Fantasy Aggression

Two measures of aggression were used. First, the total number of aggressive words in each subject's TAT stories were counted, using a list of 106 aggressive words constructed for similar purposes by Matarazzo (1954). Two raters, blind to experimental conditions, conducted the analysis (interrater reliability = .91). Similarly, these raters counted the incidences of negatives, by counting all occurrences of "not," "no," etc. This procedure was devised by McClelland (1979) as a measure of the amount of powerlessness experienced by the subject and is thus viewed as an indirect measure of the inhibition of aggression.

Analyses of variance were conducted on the number of aggressive words and negatives used before and after the subjects' TAT responses were criticized. Changes in the number of aggressive words and negatives were also examined by analysis of variance on change scores.



### Verbal Output

Analyses of variance were used to examine differences in the length of subjects' stories before and after anger provocation. Length of story onset in seconds was also examined in this manner. In both cases, time of measurement (before-after) was used as a within-subjects factor.

### Situational Affective Responses

Using the audio-taped interviews, coders rated subjects' anxiety, anger, and compliance during each portion of the study on 6-point scales. Raters used tone of voice, speech errors, and subjects' comments in making these assessments. Interrater reliability ranged from .89 to .93. Analyses of variance were conducted on these measures. They were also correlated with other measures of experimenter and interviewer assessments of subjects' responses.

### Debriefing Responses

As discussed in Batts' (Note 1) study, subjects' initial verbal and visible nonverbal responses produced after the TAT interview were recorded. These responses were rated by the two blind raters. Subjects received a score from 1 to 6 on their outward expression of anger toward the interviewer and/or the situation (anger out), and on evidence of inward expression of anger, i.e., self-degrading or other intropunitive comments (anger in). They were also rated on amount of anxiety or "upset" reported or shown (by shaking hands, worried expressions, etc.)



and on comments suggesting suspicion of the experimental procedures. Analyses of variance were performed on these scores. In addition, correlations of these ratings with interviewers' ratings and with ratings of TAT behaviors were performed.

### Subjects' Responses to the SAQ

Factor scores were derived from the subjects' responses to individual SAQ items using the SAQ factor weights obtained in Study I (see Table 5). Analyses of variance were conducted on the factor scores to examine the effects of experimental group membership on SAQ responses. Additional correlational analyses examined the relationships between SAQ factor scores and subjects' experimental behaviors.

## Results

### Overview

The results reported below involved further analysis of the data collected in the 2 x 2 x 2 factorial design reported in Batts' (Note 1) study. Three-way analyses of variance and t tests when more appropriate were conducted on five of the dependent measures taken in that study: blood pressure changes, fantasy aggression, verbal output, debriefing responses, and SAQ factor scores. When indicated, simple effects analyses were performed utilizing the Duncan Multiple Range Test. Finally, correlational analyses were conducted to examine the relationships between SAQ factors and various behavioral measures.





In general, the results suggest that low blood pressure subjects were less willing to engage affectively in the experimental task relative to high blood pressure subjects. They exhibited less anxiety and intropunitiveness during debriefing and less belief in the need for comfort with aggression expression. The high blood pressure subjects, however, demonstrated less change in physiological arousal than low blood pressure subjects. This result provided evidence for the independence of physiological and behavioral indicators of emotional engagement in the situation proposed by Singer (1974). It was also found that the fantasy aggression of high blood pressure subjects exposed to female experimenters was greater than that of low blood pressure subjects before anger provocation. Yet high blood pressure subjects seemed to inhibit aggression after anger provocation, while low blood pressure did not, in general, tend to do so.

Apparently, then, the data indicate that low blood pressure subjects differed less as a function of the race and sex of interviewer manipulations than high blood pressure subjects. Yet there was evidence that they discriminated in their responses to blacks and whites, apparently choosing not to get upset in the interracial situation. High blood pressure subjects, by contrast, showed greater differences as a function of the race and sex manipulations. They appeared to respond to the interracial situation in a manner implying defensiveness or suppression of angry responses. Further, high blood pressure subjects seemed to respond with most suppression to female interviewers.



The following nine hypotheses were formulated:

1. The subjects in the high blood pressure group will tend to exhibit a higher magnitude of change in blood pressure level after the anger provocation situation, relative to the low blood pressure group. This trend has been demonstrated in numerous studies when normals and high blood pressure subjects are compared (Buss, 1961; Shapiro, 1961) and suggests a different or altered homeostatic mechanism in the latter group.

2. The tendency in Hypothesis 1 will be further accentuated when the interviewer is white.

3. Margaret Thaler Singer (1974) postulated that varying levels of engagement in a task will correlate with such measures of involvement as verbal responsiveness and amount of affect. The results of the first analysis of these experimental data suggested that the low blood pressure subjects may have become less engaged in the story-telling procedure after provocation by a white interviewer, relative to high blood pressure subjects. The third hypothesis is that the low blood pressure group will demonstrate less engagement in the Thematic Apperception Test (TAT) task after anger provocation by a white interviewer, relative to the high blood pressure group. This will be demonstrated by:

(a) the content of their responses as coded after the TAT procedure, and

(b) a decrease in the total length of their TAT stories after the anger provocation.



4. The number of aggressive words and negatives included in the TAT stories of all subjects will increase after anger provocation.

5. The increases noted in Hypothesis 4 will be most extreme among high blood pressure subjects exposed to a white interviewer.

6. Since the literature suggests that high blood pressure subjects have more suppressed aggression than normals (Alexander, 1939; Buss, 1961; Esler et al., 1977), it is hypothesized that the number of aggressive words and negatives included in the TAT stories of the high blood pressure group will tend to be higher than those of the low blood pressure group before anger provocation.

7. The tendency noted in Hypothesis 6 will be further accentuated when the interviewer is white.

8. High blood pressure subjects will report more support for aggression suppression on the SAQ than low blood pressure subjects. Further, this tendency will be most apparent when the interviewer is white.

9. The following measures of aggression expression involving changes in blood pressure levels, fantasy content changes, interviewer ratings, debriefing response ratings, will all show significant relationships with the SAQ factors derived from Study I described above.

Reported below are the results relevant to each hypothesis. Detailed numerical presentations and discussion are presented for significant variables only. Tables of the results on all variables relevant to each



hypothesis are included in the appendices as indicated.

### Hypothesis 1

The first hypothesis was,

Subjects in the high blood pressure group will tend to exhibit a higher magnitude of change in blood pressure level after the anger provocation situation relative to the low blood pressure group. This trend has been demonstrated in numerous studies when normals and high blood pressure subjects are compared (Buss, 1961; Shapiro, 1961).

Only one of the measures of blood pressure change, systolic blood pressure change, showed significant differences between groups (see Appendix G, Table 1). As is illustrated in Table 14, Figure 1, the significant difference between blood pressure groups is opposite to the prediction. High blood pressure subjects tended to exhibit a lower magnitude of change in systolic blood pressure relative to the low blood pressure group. This finding is consistent with those of Weiner, Reiser, and Singer (1962) and Innes, Millar, and Valentine (1959) and indicates a hyporesponsiveness on the part of high blood pressure subjects. This suggests a lower level of involvement in the situation by high blood pressure subjects as measured by physiological arousal.

### Hypothesis 2

It was expected that the tendency described in Hypothesis 1 would be further accentuated when the interviewer was white. As can be seen in Figure 1, this hypothesis was not confirmed. There was no interaction between blood pressure group and the interviewer's race. A marginal





Table 14

Summary of Analysis of Variance on Changes  
in Systolic Blood Pressure

Source	df	SS	F	p <
BP	1	192.51	3.71	.05*
RE	1	147.01	2.83	.09
BP x RE	1	.01	.00	.98
SE	1	74.39	1.43	.23
BP x SE	1	2.64	.05	.82
RE x SE	1	6.89	.13	.71
BP x RE x SE	1	1.89	.04	.84

\*p < .05.

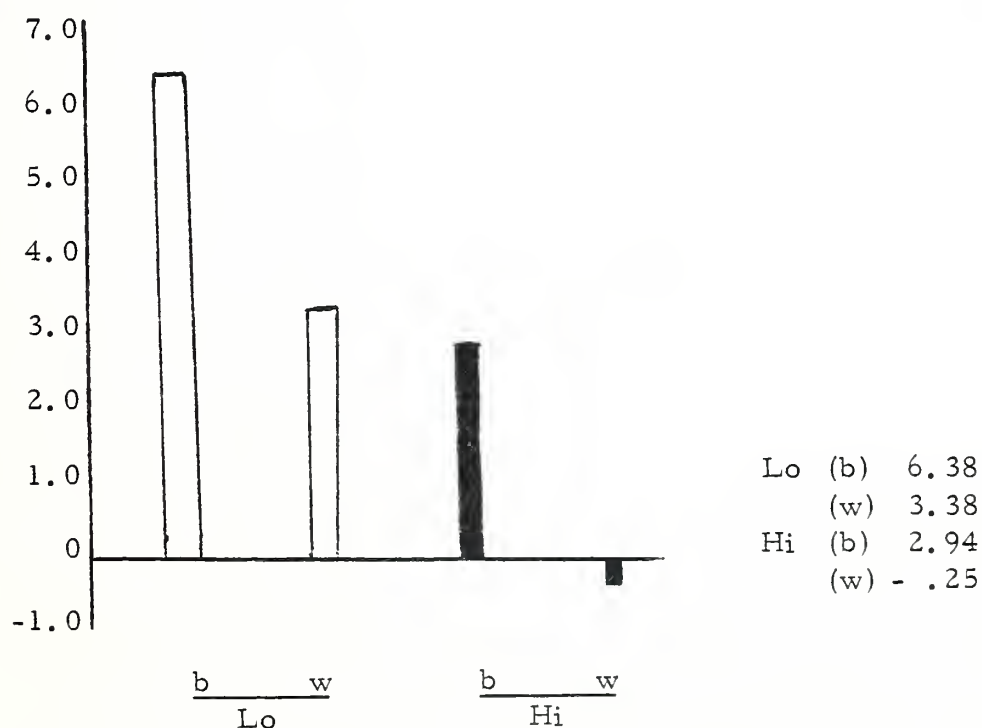


Figure 1. The effects of blood pressure and race of interviewer on changes in systolic blood pressure.



main effect for the interviewer's race was observed, suggesting that all subjects showed greater systolic blood pressure changes in the presence of a black interviewer.

Examination of the marginally significant result for changes in diastolic pressure (Table 15, Figure 2) reveals that, across both blood pressure groups, subjects exposed to a female interviewer experienced more arousal when she was white, while those exposed to a male exhibited more change when he was black.

### Hypothesis 3

Margaret Thaler Singer (1974) postulated that varying levels of engagement in a task will correlate with such measures of involvement as verbal responsiveness and amount of affect. The results of the first analysis of these experimental data suggested that the low blood pressure subjects may have become less engaged in the story-telling procedure after provocation by a white interviewer relative to high blood pressure subjects. The third hypothesis was that the low blood pressure group will demonstrate less engagement in the TAT task after anger provocation by a white interviewer relative to the high blood pressure group. This will be demonstrated by:

(a) the content of their responses as coded after the TAT procedure, and

(b) a decrease in the total length of their TAT stories after the anger provocation.

### Debriefing Responses

Appendix H, Table 1, shows that the debriefing ratings of anger-in, anger-out, anxiety and suspicion were significantly different as a function of experimental group. These measures were obtained from blind independent ratings by two graduate students in psychology (interrater reliability = .89 to .93). These raters evaluated the experimenter's written



Table 15

Summary of Analysis of Variance on Changes  
in Diastolic Blood Pressure

Source	df	SS	F	p <
BP	1	56.25	1.31	.25
RE	1	2.25	.05	.81
BP x RE	1	16.00	.37	.54
SE	1	25.00	.58	.41
BP x SE	1	42.25	.99	.32
RE x SE	1	156.25	3.65	.06
BP x RE x SE	1	9.00	.21	.64

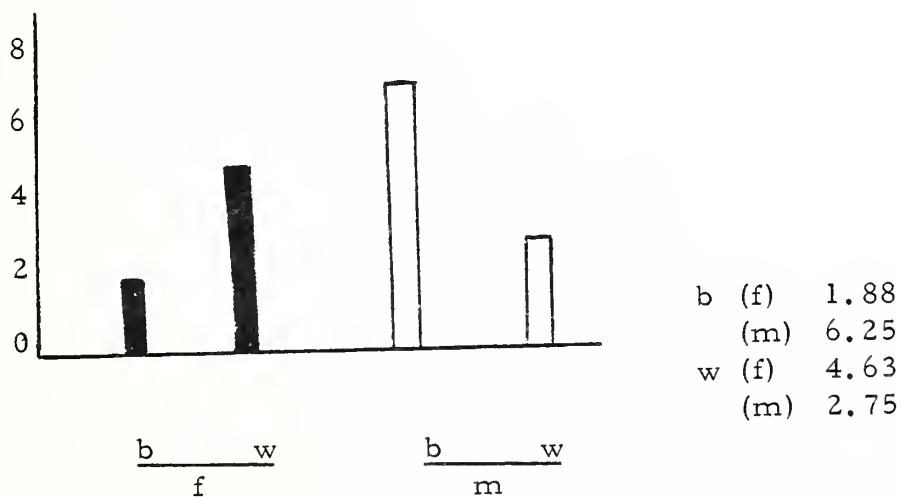


Figure 2. The effects of race of interviewer and sex of interviewer on changes in diastolic blood pressure.



record of how angry (oriented inward toward self, outward toward interviewer, or both), how anxious or "upset," and how suspicious subjects appeared.

Additional evidence for the reliability of these measures was the significant correlations (.25 to .38) between debriefing ratings and post-experimental assessments of the subject by interviewers.

It was expected that low blood pressure subjects would appear less anxious or "upset" and that they would be low on anger-in, relative to high blood pressure subjects after exposure to a white interviewer. They might also be expected to express less anger at the interviewers or the situation, while displaying more evidence of suspicion about the "realness" of the experimental manipulation.

Examination of Tables 16 to 19 and Figures 3 to 6 reveals that, generally, the predicted trends were found. Low blood pressure subjects were rated as less anxious and less intropunitive relative to the high blood pressure group. Interactions between blood pressure group and race of interviewer were not observed on these measures, however.

Three significant effects were obtained on the anger-out ratings, a main effect for interviewer's sex, an interaction between interviewer's sex and interviewer's race, and a three-way interaction. Examining the means in Figure 5 clearly indicates that low blood pressure subjects tended to be perceived as equally angry after exposure to interviewers of both races and sexes. By contrast, high blood pressure subjects exposed





Table 16  
Summary of Analysis of Variance on  
Debriefing Rating: Anxiety

Source	df	SS	F	p <
BP	1	35.23	16.98	.01*
RE	1	.05	.03	.85
BP x RE	1	.06	.03	.85
SE	1	5.22	2.52	.11
BP x SE	1	11.11	5.36	.02*
RE x SE	1	.38	.18	.66
BP x RE x SE	1	.01	.01	.95

\*p < .05.

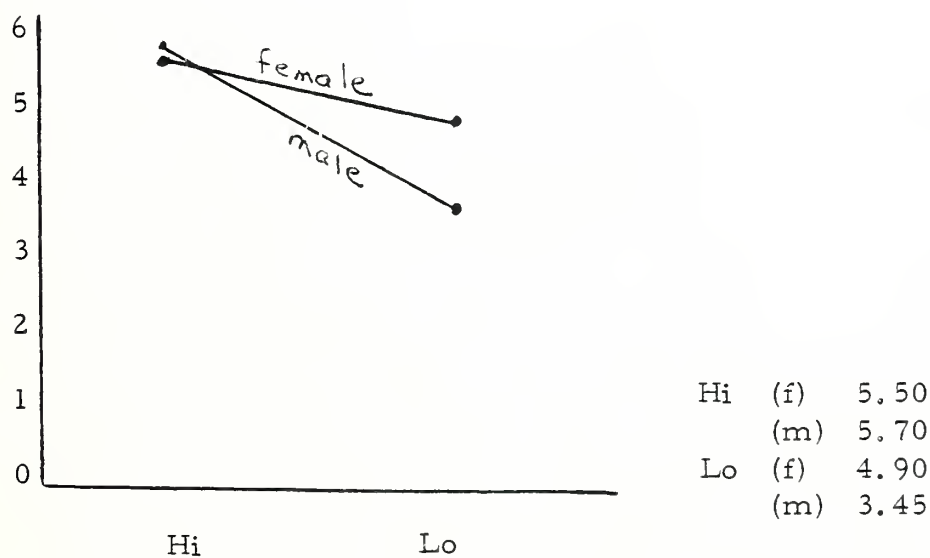


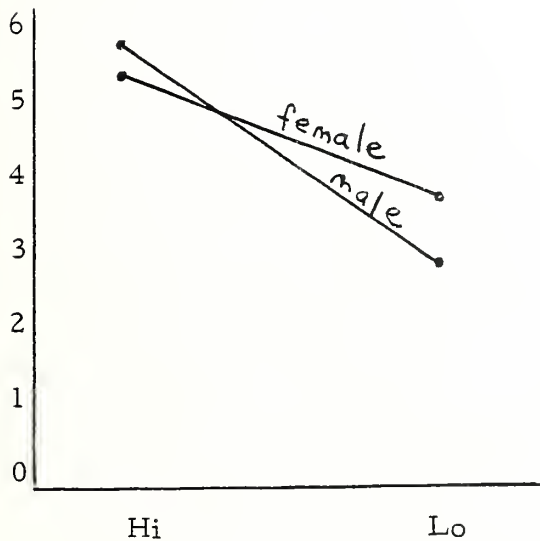
Figure 3. The effects of blood pressure group and sex of interviewer on anxiety ratings.



Table 17  
Summary of Analysis of Variance on  
Debriefing Rating: Anger-In

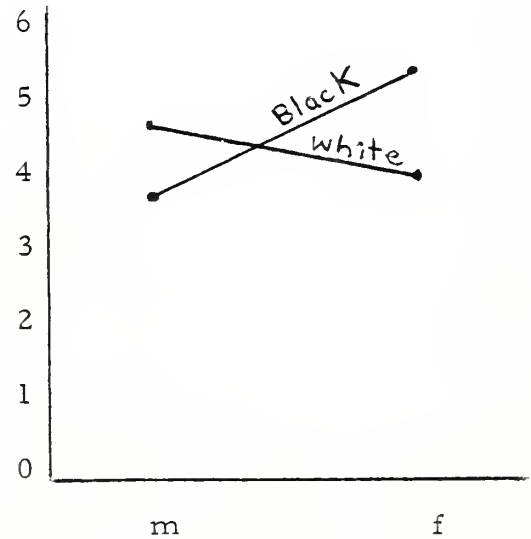
Source	df	SS	F	p <
BP	1	74.72	23.85	.01*
RE	1	.62	.20	.65
BP x RE	1	2.13	.68	.41
SE	1	1.06	.34	.56
BP x SE	1	11.02	3.52	.06
RE x SE	1	15.07	4.81	.03*
BP x RE x SE	1	.11	.04	.85

\*p < .05.



(collapsing across RE)

Hi (f)	5.19	Lo (f)	3.87
(m)	5.75	(m)	2.75



(collapsing across BP)

M (w)	4.63	F (w)	3.94
(b)	3.88	(b)	5.11

Figure 4. The effects of experimental variables on anger-in ratings.

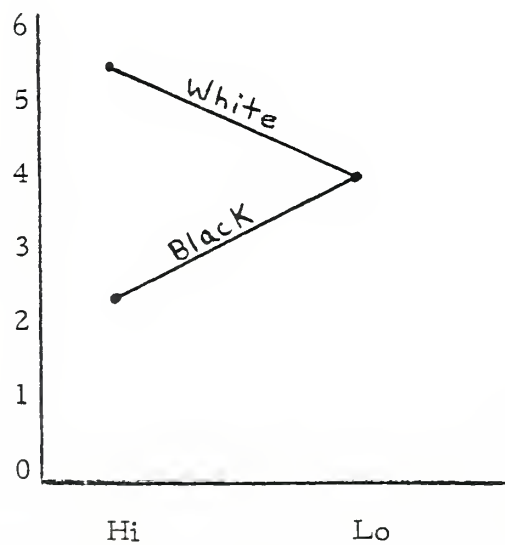
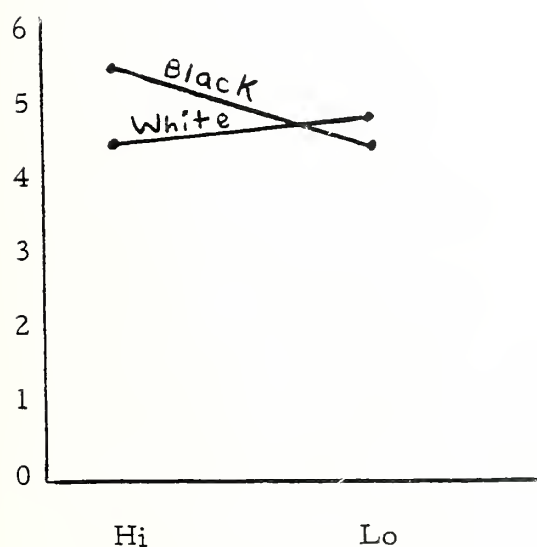


Table 18

Summary of Analysis of Variance on  
Debriefing Rating: Anger-Out

Source	df	SS	F	p <
BP	1	.11	.04	.84
RE	1	6.81	2.30	.13
BP x RE	1	3.55	1.20	.27
SE	1	11.41	3.86	.05*
BP x SE	1	1.21	.41	.52
RE x SE	1	13.46	4.55	.03*
BP x RE x SE	1	18.80	6.36	.01*

\*p < .05.



Hi (b) 5.4 (w) 4.5  
Lo (b) 4.4 (w) 4.8

Hi (b) 2.3 (w) 5.4  
Lo (b) 4.0 (w) 4.0

Figure 5. The effects of experimental variables on anger-out ratings.



Table 19  
Summary of Analysis of Variance on  
Debriefing Rating: Suspicion

Source	df	SS	F	p <
BP	1	6.39	2.46	.12
RE	1	.00	.00	.97
BP x RE	1	.20	.08	.77
SE	1	1.10	.42	.51
BP x SE	1	12.04	4.63	.03*
RE x SE	1	1.01	.39	.53
BP x RE x SE	1	.00	.00	.99

\*p < .05.

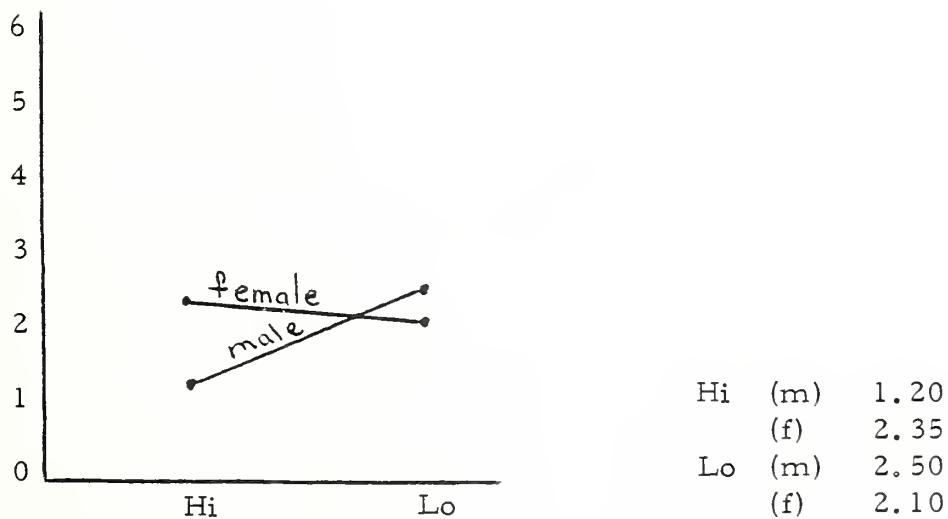


Figure 6. The effects of blood pressure group and sex of interviewer on suspicion ratings.





to a female interviewer appeared to express more anger-out if she were white rather than black. These same subjects exposed to male interviewers appeared to express more anger-out after being exposed to a black than a white. An analysis of simple effects revealed that it is indeed the differences between high blood pressure subjects exposed to white and black females that produce the significant three-way interaction. Subjects exposed to male interviewers did not differ significantly as a function of race of interviewer and blood pressure group.

Although there was a blood pressure by sex of interviewer interaction, the general trend of subjects regarding suspicion suggests that low blood pressure subjects were at least as suspicious as high blood pressure subjects and, if anything, more so than. Again, it appeared that high blood pressure subjects distinguished more between male and female interviewers than did low blood pressure subjects.

### Verbal Output

The hypothesis that low blood pressure subjects would talk less after exposure to a white experimenter was not supported by the data (see Appendix I, Table 9). It was true, however, that all subjects talked more to a female interviewer (see Appendix I, Tables 1 and 2, Figures 1 and 2). There was also a significant decrease in the total time of all subjects' stories from before to after the anger provocation ( $t = 9.2$ ,  $p < .01$ ). Analysis of variance on change scores reveals a marginal main effect for race of interviewer (see Appendix G, Table 1). It appeared that all



subjects insulted by a white interviewer showed greater decreases in the length of their TAT stories.

In general, the analyses of debriefing ratings and verbal output provided only partial support for Hypothesis 3. Debriefing ratings clearly indicated lower levels of affective involvement in the experimental situation on the part of low blood pressure subjects. Contrary to the hypothesis, however, were two sets of findings. First, a significant interaction of blood pressure group and race of interviewer on the debriefing ratings was obtained in only one instance, and even there it was obscured by the effects of the sex of the interviewer. Second, the verbal output measure based on the total length of the subjects' TAT stories showed neither a main effect for blood pressure group nor an interaction between race of interviewer and blood pressure group.

#### Hypothesis 4

Hypothesis 4 was,

The number of aggressive words and negatives included in the TAT stories of all subjects will increase after anger provocation.

A one-tailed, repeated measures t test on the changes in aggressive words before and after anger provocation revealed that, opposite to the prediction, there is a significant decrease in aggressive words (t = -1.73, p < .05) across all subjects.

A one-tailed, repeated measures t test on the changes in negatives before and after anger provocation revealed that, consistent with the



prediction, there is a significant increase in negative words ( $t = 1.94$ ,  $p < .05$ ) across all subjects.

The data provided only partial support for Hypothesis 4. While use of aggressive words decreased after provocation, use of negatives increased. It might be concluded that all subjects felt relatively more powerless (McClelland, 1975, 1979) even while they projected less anger. This may reflect inhibition of aggressive responses.

#### Hypothesis 5

It was expected that the increases noted in Hypothesis 4 would be most extreme among the high blood pressure subjects exposed to a white interviewer. Contrary to these expectations, an analysis of variance on change scores in the use of aggressive words showed no significant interaction between blood pressure group and race of interviewer (see Appendix G, Table 1). Further, an analysis of variance on change scores in the use of negatives after anger provocation (Table 20, Figure 7) showed a significant interaction between blood pressure group and race of interviewer. Low blood pressure subjects exposed to a white interviewer showed a decrease in the use of negatives, while all other groups used more negatives after provocation.

While Hypothesis 5 was not supported, the results indicated that low blood pressure subjects showed the greatest differences in their changes in the use of negative words as a function of the interviewer's race. Apparently, only low blood pressure subjects exposed to a white



Table 20

Summary of Analysis of Variance on Changes  
in the Use of Negative Words

Source	df	SS	F	p <
BP	1	55.72	2.57	.11
RE	1	66.54	3.06	.08
BP x RE	1	180.74	8.32	.01*
SE	1	18.02	.83	.36
BP x SE	1	2.83	.13	.71
RE x SE	1	1.22	.06	.81
BP x RE x SE	1	.00	.00	1.00

\*p < .05.

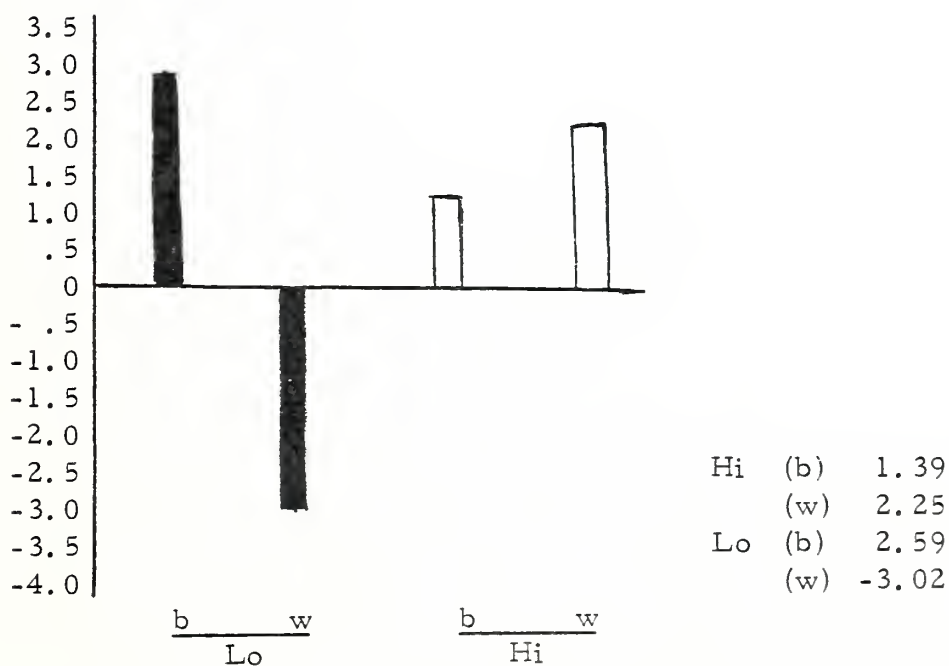


Figure 7. The effects of blood pressure group and race of interviewer on changes in the use of negative words.





interviewer experienced increased feelings of power.

### Hypothesis 6

Since the literature suggests that high blood pressure subjects have more suppressed aggression than normals (Alexander, 1939; Buss, 1961; Esler et al., 1977), it was hypothesized that the number of aggressive words and negatives included in the TAT stories of the high blood pressure group will tend to be higher than those of the low blood pressure group before anger provocation.

As is evident from an examination of Table 21, Figure 8, this prediction does hold for high blood pressure subjects exposed to a female experimenter. Contrary to the hypothesis, however, there was no main effect for blood pressure and high blood pressure subjects exposed to a male apparently used fewer aggressive words before anger provocation than did low blood pressure subjects. Analysis of simple effects did not isolate any particular difference between means as the source for the significant interaction effect. The differential responses among the high blood pressure group is a consistent finding, however.

### Hypothesis 7

It was also claimed that the tendency noted in Hypothesis 6 would be further accentuated when the experimenter was white. The interaction between race of interviewer and blood pressure group on aggressive words before anger provocation did not reach significance, however. Thus, Hypothesis 7 was not confirmed.



Table 21

Summary of Analysis of Variance of Aggressive  
Words Before Anger Provocation

Source	df	SS	F	p <
BP	1	15.96	.20	.65
RE	1	33.17	.42	.52
BP x RE	1	24.93	.31	.57
SE	1	446.59	5.63	.02*
BP x SE	1	327.76	4.13	.04*
RE x SE	1	97.71	1.23	.27
BP x RE x SE	1	24.45	.31	.58

\*p < .05.

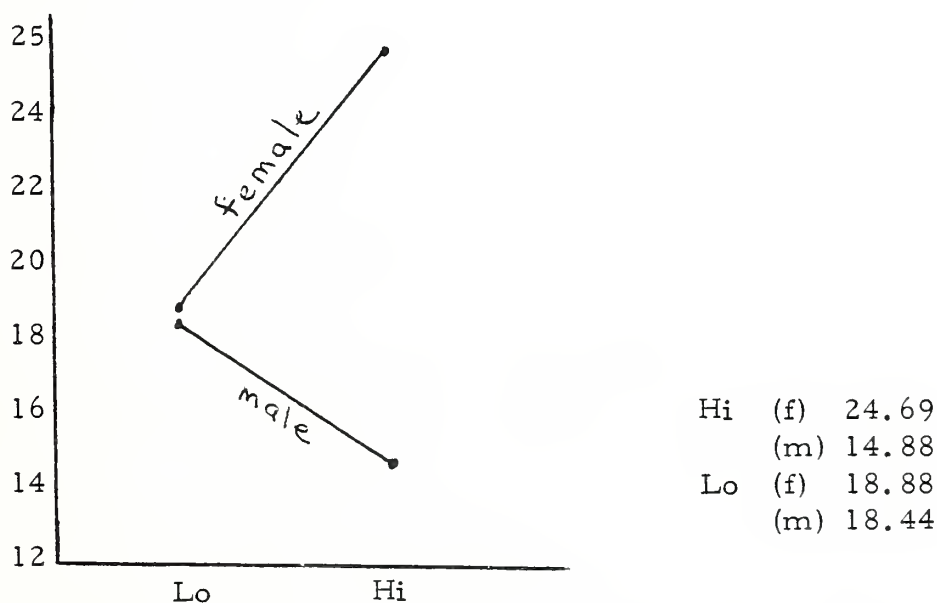


Figure 8. The effects of blood pressure group and sex of interviewer on aggressive words before provocation.



## Hypothesis 8

It was expected that,

High blood pressure subjects will report more support for aggression suppression on the SAQ than low blood pressure subjects. Further, this effect will be most apparent when the interviewer is white.

The results of the analyses of variance on SAQ factor scores using blood pressure group and race of interviewer as independent variables were only partially consistent with this prediction. These analyses revealed that subjects within this experimental sample, much like those within the survey sample, tended to report more belief in the appropriateness of suppression of aggression after exposure to a black interviewer. When the interviewer was white, however, subjects, independent of blood pressure group, expressed less belief in anger suppression (see Appendix J, Tables 1-5, Figures 1-4). Examination of subjects' responses to Factor V suggests, however, that all subjects were more likely to report that they would get angry after exposure to a white. In addition to these main effects for the race of interviewer, responses differed by blood pressure group on only one factor (see Appendix J, Figure 11). On Factor IV, in this sample as in the survey data, high blood pressure subjects reported more disagreement with the belief that aggression should be suppressed, again suggesting more involvement and upset (see Hypothesis 3) on the part of this group.

On all of these significant factors, subjects tended to disagree with the desirability of aggression expression, so the results discussed



above all relate to degree of disagreement. It is also interesting to note how powerful the race of interviewer effects were in the anger-provocation situation; four of the eight factors had significant race of interviewer main effects.

### Hypothesis 9

The measures of aggression expression involving changes in blood pressure levels, fantasy content changes, debriefing response ratings, and verbal output will all show significant relationships with SAQ factors derived from Study I described above.

Appendix K, Table 1, shows the correlations between SAQ factor scores and experimental measures across all subjects, while Appendix L, Table 1, displays these correlations within each blood pressure group.

Given the large number of correlations examined, it is important not to place too much importance on the few obtained significant relationships shown in these tables. Further, none of the correlations are particularly strong. Nonetheless, both in the total sample and within each blood pressure group, there was evidence for consistency between verbal reports on the SAQ and experimental behaviors.

In the total sample, for example, significant negative correlations were obtained between Factor V, "Endorsement of anger response to provocation by outsiders," and changes in negative words, and in total time. Thus, those who showed less change in experimental behavior were most likely to favor suppression. Similarly, the debriefing rating of anger-out was negatively related to Factor IV, "Rejection of indirectness





in anger expression to offspring." Similar consistency can also be viewed within each of the blood pressure groups as noted in Appendix L.

There is, then, some limited evidence for the consistency between SAQ factor scores and experimental behavior. It must be concluded, however, that Hypothesis 9 has not been adequately tested.

It was not reasonable to examine correlations between the SAQ factors and behavior within each cell of the  $2 \times 2 \times 2$  design because there were too few subjects within each condition. Further results reported above suggest the power of the sex and race manipulations on both the SAQ and behavioral measures. Thus, a more reasonable test of the relationships between the SAQ and behaviors would require a large-scale replication that included the manipulations of race and sex of interviewer and measurement of a variety of aggression-related behaviors.



## CHAPTER IV

### DISCUSSION

#### Overview

The studies reported in this work provide empirical evidence from two relatively large samples ( $\underline{n} = 150$ ;  $\underline{n} = 64$ ) for the hypothesis that people with high blood pressure have an intrapsychic conflict between expression and inhibition of aggression. The results of each study will be summarized and discussed below. In a final section, general implications of both investigations will be presented.

#### Study I

The main purpose of the first study reported above was to explore differences between black females with high and low blood pressure on self-reported attitudes and behaviors regarding aggression socialization practices and the expression or suppression of angry feelings. The study also examined effects of differences in the racial character of the situation on the expression of these attitudes. A Socialization of Aggression Questionnaire was administered to both an experimental and a survey sample. In each case, race of experimenter was manipulated, and in the survey



sample the backgrounds of respondents were permitted to vary unselectively.

It was expected that a reliable factor structure would be derived in two administrations of the SAQ and that these factors would distinguish blood pressure groups. Further, statistical interactions between the racial character of the situation and individual differences in blood pressure were expected to reflect greater conflict between the expression and suppression of aggression among high blood pressure subjects exposed to a white experimenter than any other group. Consistent with these expectations, the factor structure of the SAQ was replicated across studies and impressive discrimination of the blood pressure groups was achieved. This discrimination of blood pressure groups was, somewhat surprisingly, improved when the factor weights derived from the survey sample were applied to the data of the experimental sample.

Multiple regression analyses indicated that the SAQ factors accounted for a relatively large proportion of the variance in blood pressure groups. The factors alone accounted for greater variance than background variables such as age and occupation. In addition, the interaction of experimenter's race and the factors explained almost 10% of the variance. This result provided additional support for the utility of the SAQ in distinguishing blood pressure groups, while also suggesting that these groups were differentially affected by the racial character of the situation.

Further, the analyses of subjects' responses to the SAQ supported



the claim that high and low blood pressure subjects tend to differ in their self-reports about the appropriateness of the socialization and direct expression of anger. Perhaps the most striking support for this difference between these blood pressure groups came from their increased discrimination when the unpooled covariance matrix was used. This was true because there were reliable differences in the intercorrelations among SAQ factors between blood pressure groups. Detailed examination of these blood pressure group differences in SAQ factor intercorrelations suggested greater conflict between aggression expression and suppression in the high blood pressure group. This claim has existed at least since the work of Franz Alexander (1939). The present study, however, was the second investigation of the hypothesis within a relatively large sample of people (see also Harburg et al., 1973). It was significant also because it focused on a black population.

The results of Study I illustrated an apparent conflict in the high blood pressure sample between what one should do and what one in fact reports would be done in anger-provocation situations, supporting the classic psychoanalytically based theory of the hypertensive's intrapsychic dilemma. The data also strikingly revealed the influence of the race of an interviewer in this dilemma. The obtained statistical interactions between blood pressure group and experimenter's race suggest that blacks with higher blood pressures may in fact continue to feel the effects of the historic need to learn to suppress aggression against whites. While low





blood pressure subjects responded approximately equivalently to SAQ factors independent of the experimenter's race, high blood pressure subjects reported more belief in the appropriateness of aggression suppression and, paradoxically, a greater tendency to report experiencing anger after exposure to a white than a black experimenter. Thus, subjects falling within the normal blood pressure group appeared to have begun to internalize the idea that they have a choice in how they will respond to whites. Further, these subjects appeared to believe that expressing anger directly is appropriate.

The obtained significant main effects of experimenter's race and interactions between this variable and blood pressure group on the SAQ have several possible implications. One could argue that the SAQ is reactive and therefore a less than valid measure. Another possibility, however, is to view the SAQ as a behavioral sample much like a projective technique. Then administration of the instrument in settings varying with regard to race, sex, and/or other characteristics of the context would be a valued source of information. When viewed in this light, the results presented above suggest the importance of considering interviewer's race in all clinical investigations of aggression and other such interracially "sensitive" personality variables. Williams and McKegney (1965) and Williams, Kimball, and Williard (1972) have supported this conclusion in their findings that the interpersonal relationships within interviews influenced blood pressure changes more than the contents of the sessions.



In general, the results of the first study were consistent with the theoretical perspective on the etiology and/or maintenance of high blood pressure among blacks, and with the approach to the socialization of aggression expression among blacks presented earlier. The data not only supported the utility and reliability of the SAQ factors in distinguishing blood pressure groups, but also demonstrated the conflicted attitudes toward aggression expression among high blood pressure subjects so frequently implicated in earlier works on these topics. No less significant were the strong influences of the racial character of the situation on the SAQ reports of black females. Again these results provide clear support for the racially sensitive character of black socialization of aggression and the need to consider the racial composition of the interview context in any research or clinical activity regarding black Americans.

## Study II

The second study reported in this document examined observable behavioral differences in aggression between low and high blood pressure groups as well as differences in their attitudes and self-reported behaviors. High and low blood pressure subjects were exposed to black or white male or female interviewers who became increasingly insulting during the course of a TAT interview. A variety of indicators of aggressive behavior were monitored. It was expected that low blood pressure subjects would experience less affective involvement in the experimental situation, especially after anger provocation by a white. High blood pressure subjects



were expected to be more angry before the anger provocation, but it was thought that they would express their feelings less directly after provocation. The results were also expected to clarify the Batts (Note 1) finding that high blood pressure subjects appeared more angry than lows after provocation.

Looking first at the measures of physiological arousal based on blood pressure changes, contrary to the prediction, low blood pressure subjects demonstrated the greatest change in systolic blood pressure. High blood pressure subjects demonstrated the least change, suggesting a hypo-responsivity consistent with the findings of Singer (1974). On the behavioral measures, by contrast, low blood pressure subjects tended to display less affective involvement in the situation than high blood pressure subjects. Debriefing ratings of intropunitiveness and anxiety showed that high blood pressure subjects were rated as more anxious and angry at themselves relative to low blood pressure subjects. Similar ratings of subjects' anger directed at the interviewer or the situation revealed that high blood pressure subjects were rated as significantly angrier after exposure to white than black female interviewers, while low blood pressure subjects did not tend to discriminate. Further, all subjects tended to be viewed as angrier at males. Another measure of engagement based on total length of the TAT stories also revealed the importance of the sex manipulation in that there was a main effect for sex of interviewer, with all subjects talking more to a female.



Two measures were derived from the contents of the subjects' TAT stories: number of aggressive words and number of negatives. While the former measure is thought to be a projective measure of aggression, the latter is said to measure experienced powerlessness (McClelland, 1975). Prior to anger provocation, high blood pressure subjects exposed to females used more aggressive words than any other group. After anger provocation, however, it was low blood pressure subjects exposed to white interviewers who demonstrated a decrease in the use of negative words, while negative words increased for all other groups. Contrary to the prediction, high blood pressure subjects did not show a greater increase in aggressive or negative words than the low blood pressure group, nor was this especially true when they were exposed to whites.

On the SAQ, experimental subjects appeared most sensitive to the racial character of the situation. Main effects for race of interviewer were observed on four factors. All of these effects were consistent with the prediction that black female subjects would demonstrate both a greater tendency to report experiencing anger and a greater belief in its appropriateness after exposure to a white. Consistent patterns of correlations were also found between SAQ self-reports and observed experimental behaviors.

Given the traditional interpretations of the projective measures used in this study, the results suggest that high blood pressure subjects experienced more aggression initially, yet felt less powerful to express





it relative to the low blood pressure group. Interestingly, these results were most apparent after exposure to female interviewers. This outcome is perhaps not surprising given the mother's historic role as the primary on-going socializing agent. From this perspective, female interviewers may have been more potent reminders of internalized parental attitudes toward aggression expression, and particularly for the high blood pressure subjects.

In only one instance was there a main effect of blood pressure on the SAQ, and there were no significant blood pressure group by race of interviewer interactions. That result did indicate that the high blood pressure group supported indirect expression more than the low blood pressure group, however. The lack of evidence for the predicted interactions on the SAQ underscores the greater influence of the racial character of the situation than blood pressure group differences on self-reports regarding aggression expression.

The results suggest, nonetheless, that within same-race encounters, high and low blood pressure groups do differ. Low blood pressure subjects tended to act as has typically been found, in that they became more physiologically aroused after anger provocation. These subjects also inhibited aggression in the same-race encounter, as indicated by an increase in the use of negatives and a decrease in aggressive words, suggesting more involvement and concern for appearing non-aggressive in that condition. It might be argued that such a response represented a desire not to antagonize a fellow black of higher status whom they were



trying to help out. The results of the SAQ data for the experimental sample suggest that all subjects reported suppression of aggression as more appropriate after exposure to a black interviewer. The fact that low blood pressure subjects behaved consistently with their self-reports suggests that they were not experiencing the same emotional conflict about how to behave as the high blood pressure group.

As Singer et al. (1974) noted, it is not at all unusual for there to be discrepancies between measured physiological arousal and amount of overt affective or verbal responsiveness. The results within both blood pressure groups in this sample indicated such a discrepancy between response modes. Low blood pressure subjects who demonstrated lower levels of affective and verbal involvement in the situation, particularly after anger provocation, showed the greatest changes in physiological arousal as indexed by systolic blood pressure. By contrast, high blood pressure subjects who gave more indications of affective involvement showed less physiological arousal. The result suggests the independence of various measures of emotional engagement.

Within the experimental sample, subjects' responses to the SAQ were most affected by the race of the person who had "interviewed" (i.e., attacked) them in the anger-provocation situation. These data indicate that the SAQ is reactive to the racial character of the situation, and especially after a highly involving encounter. These findings underscore the likelihood that all blacks have to varying degrees shared in "training to



be black," no matter how they may currently behave in such encounters. Further, the hypothesized conflict between aggression expression and inhibition within people who have higher blood pressures was still apparent in high blood pressure subjects' SAQ responses on one factor dimension, even within this sample where interviewer's race was the major variable distinguishing groups. On this dimension, Factor IV, high blood pressure subjects reported less rejection of indirectness in anger expression to offspring than low blood pressure subjects.

In general, the results of the second study provided partial support for the classic psychoanalytic account of the etiology and/or maintenance of essential hypertension. While the study did reveal differences between high and low blood pressure subjects in their response to anger provocation, it was not the case that high blood pressure subjects suppressed all overt indications of aggressive responding. Rather, it appeared that low blood pressure subjects chose either to disengage affectively after anger provocation or to express anger directly, while high blood pressure subjects tended either to become anxious and intropunitive or to provide behavioral indicators of aggression suppression. Thus, apparently the dilemma for the individual with higher blood pressure is not merely whether or not to express angry emotions, but how.

#### General Discussion

This research empirically demonstrates the claim that people with high blood pressure have an intrapsychic conflict between aggression



suppression and expression. In addition, by examining a black population of high and low blood pressure subjects exposed to racially varied targets, it was possible to show that this conflict was not simply between suppression and expression of aggression, but rather between alternative ways of handling angry feelings. The results also support the claim that many blacks, regardless of their blood pressure levels, experience different attitudes and self-reported behaviors, as well as actual behavioral responses, in interracial as opposed to intraracial encounters. Most studies reported in the literature have suffered from small sample sizes, lack of black samples, and lack of a variety of measures of aggression, in terms of its attitudinal and behavioral components. Thus, the current evidence is some of the strongest support yet obtained for the role of suppressed aggression in the daily lives of black Americans, and specifically among those threatened with hypertension.

At the same time, these studies have provided evidence for the utility of the SAQ as a measure of attitudes about aggression expression. The instrument also was shown to discriminate high and low blood pressure subjects. The SAQ's discriminant and convergent validity is not available; thus, the instrument's psychometric properties are not well established. Future work must examine its relationship to other measures of aggression and its divergence from measures of such variables as self-esteem and self-acceptance.

Both studies revealed, however, that the SAQ was reactive to the





racial character of the situation, and in the second study these main effects for race of interviewer seem almost to obscure any other findings. Thus, the SAQ data reported above demonstrate once again the need to examine attitudinal research in terms of the context of attitude expression. Future research needs to explore under what conditions people report racially relevant attitudes most consistent with their actual behaviors.

What is perhaps most striking about the results of both of the studies reported above is the power of the interracial situation to influence these subjects' attitudes, self-report, and actual behaviors. For the apparently growing numbers of United States citizens who believe that race is no longer a major factor in American life (Condran, 1979), the implications of these findings may be disheartening. Both high and low blood pressure subjects in this investigation tended to react to the situations studied in a manner suggesting that experience had taught at least caution in expressing anger to members of the dominant group. Thus, in the more involving experimental situation, subjects, regardless of blood pressure differences, were most affected by the race manipulation. Even when the sex manipulation was influential, the trend was toward more caution with a member of the dominant sexual group.

The results may be welcome for those seeking information about how the outcomes of an inequitable society continue to influence race relations in America, since the studies clearly indicated that these black females were conflicted about the appropriateness of aggression expression. They



also show that the conflict was most apparent in interracial situations. Hence, it appears that the residues of "training to be black" still influence on-going experiences. "Training to be black," in the childhood socialization of most of the subjects in these studies, meant learning to protect oneself by not expressing anger, particularly to whites and white aggression.

And finally, for those interested in how blacks tend to deal with angry feelings, the results may prove quite useful as one comes to see that there are both functional and dysfunctional means currently in use within the black population studied in the present samples. Low blood pressure subjects tended to demonstrate what might be called a new strategy of self-protection in their apparent choice to express anger and/or to withdraw from the situation affectively.

The implications of the current investigations are strong that more, not less, attention needs to be paid to helping blacks experience the choice to express pent-up hostility, as well as on-going anger experienced in interracial and intraracial encounters. This clearly implies that all Americans be taught to understand the importance of appropriate aggression expression in promoting our physical, mental, and social well-being.



## APPENDIX A

### INTRODUCTION TO EXPERIMENT

(To be used to introduce experiment to potential subjects and to start experimental procedure.)

Hello. I'm Valerie Batts, a psychology graduate student at Duke University. I am interested in how people's feelings affect their health. Right now, I am most interested in the role of feelings in high blood pressure (called essential hypertension, also). Have you ever heard anyone saying something like, "girl, I worried so much (or got so mad) I know my pressure went up!"

(PAUSE)

Well, I want to know more about that idea!

High blood pressure is the number one health problem in the black community as well as a major health problem for all Americans. Recent government figures indicate that approximately 15 percent of all Americans and 28 percent of U.S. blacks are hypertensive. Yet, we do not know what causes the problem in 90 percent of the cases! Some people say it's the food we eat; others say it's the lack of exercise in most Americans' lifestyle; many believe it's because of the way we deal with feelings; still others say it's genetic. We just don't know!

As I mentioned, I am interested in the role of feelings in this major health problem. I'd like you to help me look at this question by participating in the experiment I have set up. You will do 3 things:

- 1) Get your blood pressure taken.
- 2) Fill out some questionnaires.
- 3) Take an oral test with another interviewer.

At the end of the experiment, you can ask me any questions you have! In fact, I hope you will say whatever you feel about what happened! Everything you write and/or say will be confidential as it is group responses, not those of any individual, that are important.

I want you to know, also, that there are no wrong or right answers to the test situations I mentioned. We just need to know how different people respond to different situations.

I will also be glad to talk to you about your individual blood pressure if you're interested. You've probably heard from your doctor and/or from the news media about the importance of each person keeping up with his or her blood pressure. This can be a good start or a good follow-up for you!



## APPENDIX B

### ANGER-PROVOCATION PROCEDURE

(Start tape, experimenter)

Hello, I'm \_\_\_\_\_. As Valerie told you, this part of this experiment involves your responding to some pictures I will show you. This is a chance for you to use your imagination. I want you to make up a story. Tell me what has led up to the situation shown in the picture, describe what the characters are feeling and thinking, and tell me what the outcome will be. Speak your thoughts out loud as they come to your mind. Use your imagination freely, and make up anything you please.

(Use Set A in the standard method above with your first subject and then use Set B. Alternate with your eight subjects).

#### STANDARDIZED CRITICISM

AFTER STORY 5:

These stories are about the worst I ever heard. They are illogical and confusing. Could you try to get some better ones?

AFTER STORY 6:

There are still no ideas in it--no life, nothing. Could you try some more?

AFTER STORY 7:

This is some of the damnest stuff I have ever got. Try this one.

AFTER STORY 8:

You are pretty hopeless. See what you can do with this one.

AFTER STORY 9:

Well this is your last chance to show if you have anything in you. Go ahead!

Thank you for your efforts. Valerie is outside waiting to talk with you.

(TURN OFF TAPE)

Order of TAT cards:

SET A:	6BM	SET B:	4
	6CF		14
	2		5
	18BM		3BM
	8BM		7BM

Directions in ( ).





## APPENDIX C

### DEBRIEFING PROCEDURE

(I WILL BE RIGHT OUTSIDE OF THE ROOM WHERE TAT PROCEDURE IS ADMINISTERED).

M \_\_\_\_\_, how are you doing?

Let me take your blood pressure again now. (DO THAT AND DISCUSS READINGS AS APPROPRIATE TO SUBJECT'S INTEREST)

(PAUSE)

(RESPOND TO SUBJECT'S COMMENTS)

Let me tell you more about what just happened. The experimenter you just talked to was trained to criticize your responses to some stories so that we could have a picture of how you respond to criticism. We did this because there is evidence which suggests that people with high blood pressure respond differently than people with normal blood pressures to such situations. The experimenter, then, did not actually feel the way he/she indicated.

What do you think?

(PAUSE)

(RESPOND TO SUBJECT'S COMMENTS)

Do you have any more questions or comments?

(RESPOND TO SUBJECT'S COMMENTS)

As I said before, \_\_\_\_\_, all of the information you have given me will be used in confidence. I am assigning a number to your file (DO THAT) and your name will not be used.

Do you have any more questions or comments?

(PAUSE)

(Describe instruments and have subjects complete them)

Thank you very much for your participation! I'd like to ask you not to discuss the experiment with anyone outside of your family for the next two months as we might be working with some of your friends and/or neighbors and we don't want to spoil the effect! Will you agree to that?

(PAUSE)

(RESPOND TO SUBJECT'S COMMENTS)

Thank you again!



## APPENDIX D

### SOCIALIZATION OF AGGRESSION AND BACKGROUND QUESTIONNAIRE

Cover letter

Code number

215

Thank you for agreeing to complete the attached questionnaires!

This information is being gathered from black people throughout the southeast as part of my dissertation research. The project is unusual since very little research has been done about black people. Therefore, it is very important that you take to time to answer every question carefully and honestly. Please remember, there are no wrong or right answers. I want to know about your feelings and attitudes.

Your questionnaire will be kept entirely confidential. All answers are processed on coded anonymous computer cards by a trained professional who will never know who filled out the questionnaire. Do not put your name or social security number on the booklet.

Again, thank you for helping me.

*Valerie A Batts*

Valerie Alayne Batts  
Department of Psychology  
Duke University

-----  
Experimenter record:

Your initials \_\_\_\_\_

Volunteer's E.P. \_\_\_\_\_



Demographic Questionnaire

Code number \_\_\_\_\_

Location (where you are as you complete the accompanying questionnaire) :  
\_\_\_\_\_

Age:

Sex: male \_\_\_\_\_ female \_\_\_\_\_

Race:

Marital Status: single \_\_\_\_\_; married \_\_\_\_\_; divorced \_\_\_\_\_;  
separated \_\_\_\_\_; widowed \_\_\_\_\_; other \_\_\_\_\_

Have you ever been told by a physician that your blood pressure was high?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

Last school completed: grade school \_\_\_\_\_; high school \_\_\_\_\_;  
some college \_\_\_\_\_; technical school \_\_\_\_\_;  
college \_\_\_\_\_; graduate/professional  
school \_\_\_\_\_What is your current occupation? \_\_\_\_\_  
\_\_\_\_\_



## QUESTIONNAIRE

1

CHECK THE RESPONSE WHICH SEEMS TO BEST DESCRIBE HOW YOU FEEL:

I believe people would get along better if they were always nice to each other.

- ☐ Strongly agree
- ☐ Moderately agree
- ☐ Agree
- ☐ Moderately disagree
- ☐ Strongly disagree

It is easy for me to watch two friends argue with each other.

- ☐ Strongly agree
- ☐ Moderately agree
- ☐ Agree
- ☐ Moderately disagree
- ☐ Strongly disagree

It is easy for me to watch two strangers argue with each other.

- ☐ Strongly agree
- ☐ Moderately agree
- ☐ Agree
- ☐ Moderately disagree
- ☐ Strongly disagree

My friends say I am happy most of the time.

- ☐ Strongly agree
- ☐ Moderately agree
- ☐ Agree
- ☐ Moderately disagree
- ☐ Strongly disagree





2

NOTE WHAT YOUR MOTHER AND/OR FATHER (OR GUARDIAN) WOULD HAVE SAID TO EACH OF THE FOLLOWING WHEN YOU WERE A CHILD:

The world would be a better place if everyone were always nice to each other.

Mother		Father
_____	Strongly agree	_____
_____	Moderately agree	_____
_____	Agree	_____
_____	Moderately disagree	_____
_____	Strongly disagree	_____

Children should not get mad at their parents.

Mother		Father
_____	Strongly agree	_____
_____	Moderately agree	_____
_____	Agree	_____
_____	Moderately disagree	_____
_____	Strongly disagree	_____

Parents should not get mad at their children.

Mother		Father
_____	Strongly agree	_____
_____	Moderately agree	_____
_____	Agree	_____
_____	Moderately disagree	_____
_____	Strongly disagree	_____

If a white person calls a child a "nigger" the child should:

a) ignore it and forget it.

Mother		Father
_____	Strongly agree	_____
_____	Moderately agree	_____
_____	Agree	_____
_____	Moderately disagree	_____
_____	Strongly disagree	_____



3

b) get mad and express his feelings.

Mother

Father

_____	Strongly agree	_____
_____	Moderately agree	_____
_____	Agree	_____
_____	Moderately disagree	_____
_____	Strongly disagree	_____

c) understand that it is the white person's hang up and not get mad.

Mother

Father

_____	Strongly agree	_____
_____	Moderately agree	_____
_____	Agree	_____
_____	Moderately disagree	_____
_____	Strongly disagree	_____

CHECK THE RESPONSE WHICH SEEMS TO BEST DESCRIBE HOW YOU FEEL:

When you get mad with a person of the same sex (a friend), you

a) tell him or her directly.

_____	Strongly agree
_____	Moderately agree
_____	Agree
_____	Moderately disagree
_____	Strongly disagree

b) let him or her know indirectly or take it out on self somehow.

_____	Strongly agree
_____	Moderately agree
_____	Agree
_____	Moderately disagree
_____	Strongly disagree

c) hold it inside.

_____	Strongly agree
_____	Moderately agree
_____	Agree
_____	Moderately disagree
_____	Strongly disagree



4

When you get mad with a person of the opposite sex (spouse/friend),\* you

a) tell him or her directly.

Spouse		Friend	
_____	Strongly agree	_____	* Respond to the one(s) that apply.
_____	Moderately agree	_____	
_____	Agree	_____	
_____	Moderately disagree	_____	
_____	Strongly disagree	_____	

b) let him or her know indirectly or take it out on self somehow.

Spouse		Friend
_____	Strongly agree	_____
_____	Moderately agree	_____
_____	Agree	_____
_____	Moderately disagree	_____
_____	Strongly disagree	_____

c) hold it inside.

Spouse		Friend
_____	Strongly agree	_____
_____	Moderately agree	_____
_____	Agree	_____
_____	Moderately disagree	_____
_____	Strongly disagree	_____

When a person gets mad with his/her daughter, he/she should

a) hold it inside.

_____	Strongly agree
_____	Moderately agree
_____	Agree
_____	Moderately disagree
_____	Strongly disagree

b) tell the child directly.

_____	Strongly agree
_____	Moderately agree
_____	Agree
_____	Moderately disagree
_____	Strongly disagree



c) let the child know indirectly.

☐ Strongly agree  
☐ Moderately agree  
☐ Agree  
☐ Moderately disagree  
☐ Strongly disagree

When a person gets mad with his/her son, he/she should

a) hold it inside.

☐ Strongly agree  
☐ Moderately agree  
☐ Agree  
☐ Moderately disagree  
☐ Strongly disagree

b) tell the child directly.

☐ Strongly agree  
☐ Moderately agree  
☐ Agree  
☐ Moderately disagree  
☐ Strongly disagree

c) let the child know indirectly.

☐ Strongly agree  
☐ Moderately agree  
☐ Agree  
☐ Moderately disagree  
☐ Strongly disagree

When a stranger provokes you, you

feel angry.

feel sad.

<input type="checkbox"/>	Strongly agree	<input type="checkbox"/>
<input type="checkbox"/>	Moderately agree	<input type="checkbox"/>
<input type="checkbox"/>	Agree	<input type="checkbox"/>
<input type="checkbox"/>	Moderately disagree	<input type="checkbox"/>
<input type="checkbox"/>	Strongly disagree	<input type="checkbox"/>





6

express your feelings.

\_\_\_\_\_ Strongly agree  
 \_\_\_\_\_ Moderately agree  
 \_\_\_\_\_ Agree  
 \_\_\_\_\_ Moderately disagree  
 \_\_\_\_\_ Strongly disagree

hold your feelings inside.

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

When a white person provokes you, you

feel angry.

\_\_\_\_\_ Strongly agree  
 \_\_\_\_\_ Moderately agree  
 \_\_\_\_\_ Agree  
 \_\_\_\_\_ Moderately disagree  
 \_\_\_\_\_ Strongly disagree

feel sad.

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

express your feelings.

\_\_\_\_\_ Strongly agree  
 \_\_\_\_\_ Moderately agree  
 \_\_\_\_\_ Agree  
 \_\_\_\_\_ Moderately disagree  
 \_\_\_\_\_ Strongly disagree

hold your feelings inside.

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



# APPENDIX E

## SUMMARY OF TRENDS OF PARTICIPATION BY BLACK FEMALES VS. OTHERS (WHITES, BLACK MALES) AT MALLS

Table 1

	White experimenter	Black experimenter
Total blood pressures taken	189	139
Total black female blood pressures taken	40	42
Total others taken	149	97
Total black female refusals	180	68
Approximate time in which these observations were made	30 hrs.	20 hrs.
Total refusals per hour	6	3.4
Proportion of black females who walked by who agreed	18%	39%



# APPENDIX F

## TABLES OF SIGNIFICANT AND MARGINALLY SIGNIFICANT ANALYSES OF VARIANCE OF THE SURVEY FACTORS

Table 1

Factor I. Self-Reported Inhibition of  
Anger Expression

Source	df	SS	F	p <
HBP	1	67.92	6.26	.01*
RE	1	.41	.04	.85
HBP x RE	1	88.93	8.19	.01*

\*p < .05.

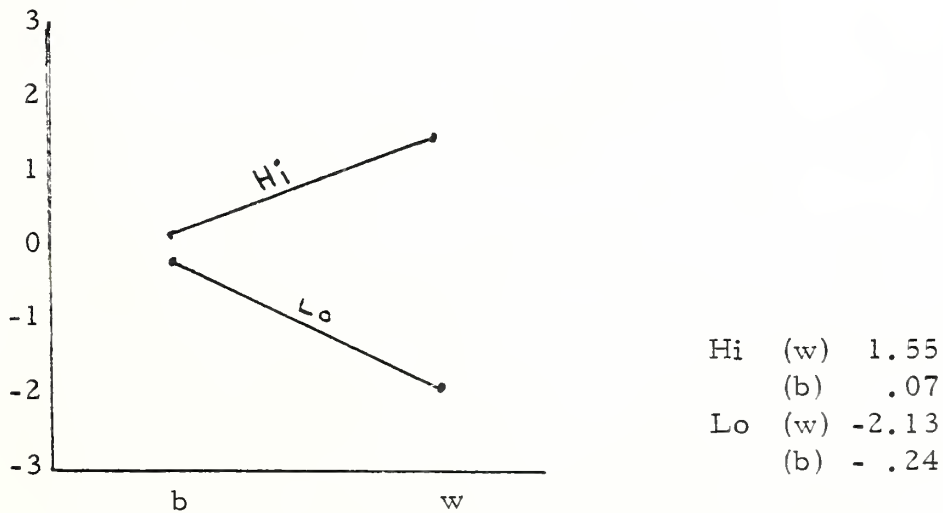


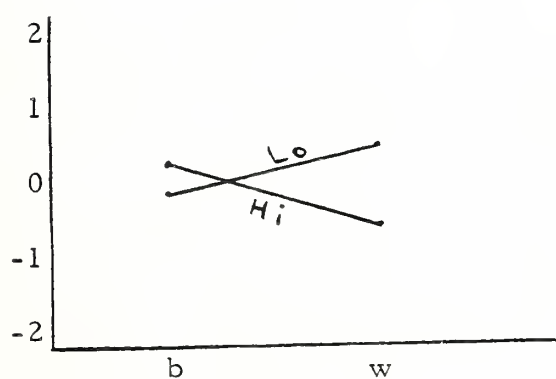
Figure 1



Table 2

Factor III. Endorsement of Direct Anger  
Expression in Close Relationships  
Regardless of Sex

Source	df	SS	F	p <
HBP	1	.78	.13	.75
RE	1	2.35	.40	.53
HBP x RE	1	19.10	3.25	.07



Hi	(w)	-.64
	(b)	.26
Lo	(w)	.56
	(b)	-.10

Figure 2



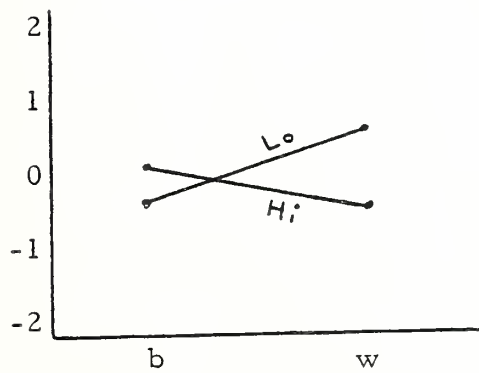


Table 3

Factor V. Endorsement of Anger Response  
to Provocation by Outsiders

Source	df	SS	F	p <
HBP	1	.01	.00	.96
RE	1	1.02	.26	.61
HBP x RE	1	15.08	3.85	.05*

\* $p < .05$ .



Hi	(w)	-.26
	(b)	.13
Lo	(w)	.74
	(b)	-.26

Figure 3



Table 4

Factor VI. Comfort with Anger Expression--  
Maternal Identification

Source	df	SS	F	p <
HBP	1	31.24	8.94	.01*
RE	1	2.79	.80	.37
HBP x RE	1	.03	.01	.92

\*p < .05.

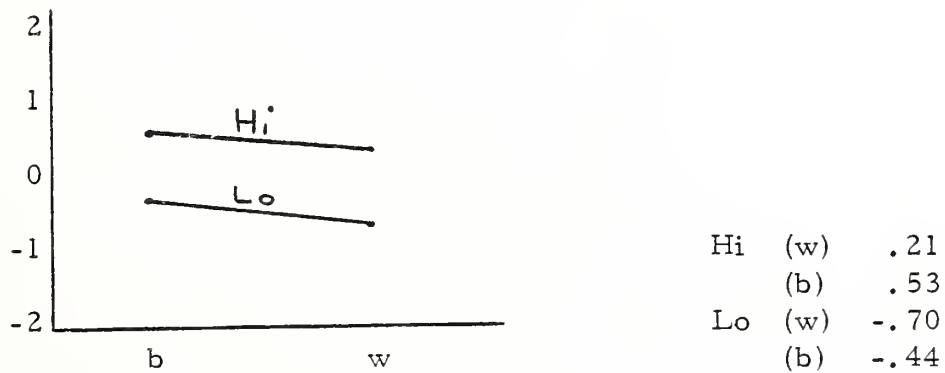


Figure 4



Table 5

Factor VIII. Endorsement of Inhibition  
of Aggression

Source	df	SS	F	p <
HBP	1	20.90	4.87	.03*
RE	1	4.08	.95	.33
HBP x RE	1	12.56	2.92	.09

\*p < .05.

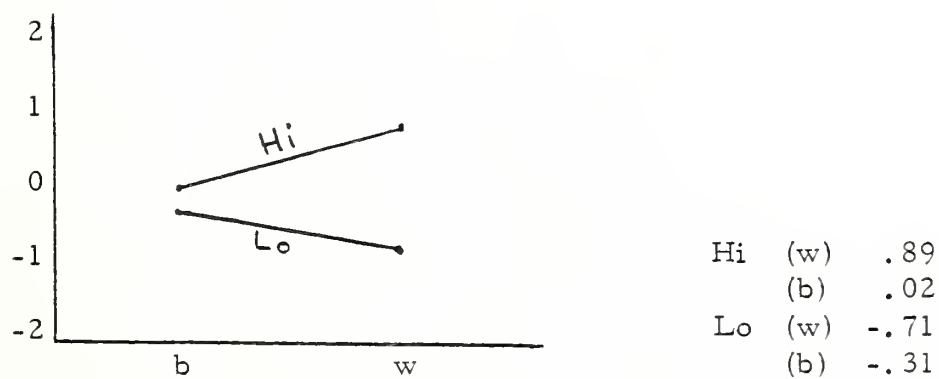


Figure 5



# APPENDIX G

## SUMMARY OF ANALYSES OF VARIANCE ON CHANGES IN SUBJECT BEHAVIOR BEFORE AND AFTER ANGER PROVOCATION

Table 1

	Overall means	Significant effects	Marginal effects
Changes in systolic blood pressure	3.14	BP (.05)	RE (.09)
Changes in diastolic blood pressure	3.87	none	RE x SE (.06)
Changes in total time of TAT stories	-24.44	none	RE (.08)
Changes in use of aggressive words	- 2.37	none	none
Changes in use of negatives	.71	BP x RE (.01)	RE (.07)





## APPENDIX H

### SUMMARY OF ANALYSES OF VARIANCE ON DEBRIEFING RATINGS OF SUBJECTS' POST-PROVOCATION AFFECTIVE RESPONSE

Table 1

	Overall means	Significant effects	Marginal effects
Anger-in response	4.40	BP (.01) RE x SE (.03)	none
Anger-out response	4.33	RE x SE (.04) BP x RE x SE (.02)	none
Anxiety or level of upset	4.89	BP (.01) BP x SE (.02)	none
Suspicion	2.06	BP x SE (.04)	none



APPENDIX I

SUMMARY OF ANALYSES OF VARIANCE ON TOTAL  
TIME OF STORIES BEFORE AND AFTER  
ANGER PROVOCATION

Table 1

Story	Overall mean	Significant effects	Marginal effects
1	53.59	none	BP x RE (.06)
2	55.14	none	SE (.07)
3	54.61	SE (.01)	BP (.08)
4	55.25	SE (.05)	BP (.07)
5	54.60	SE (.01)	BP x RE (.07)
6	51.95	none	none
7	53.53	none	SE (.08)
8	51.74	SE (.02)	none
9	49.60	none	none
10	56.81	none	none
Total time before	272.27	SE (.01)	none
Total time after	247.22	SE (.02)	none



Table 2

Total Time Before Provocation

Source	df	SS	F	p <
BP	1	23139.82	1.99	.16
RE	1	3740.78	.32	.57
BP x RE	1	19795.88	1.71	.19
SE	1	95207.25	8.21	.01*
BP x SE	1	.00	.00	1.00
RE x SE	1	5564.09	.48	.49
BP x RE x SE	1	.00	.00	1.00

\*p < .05.

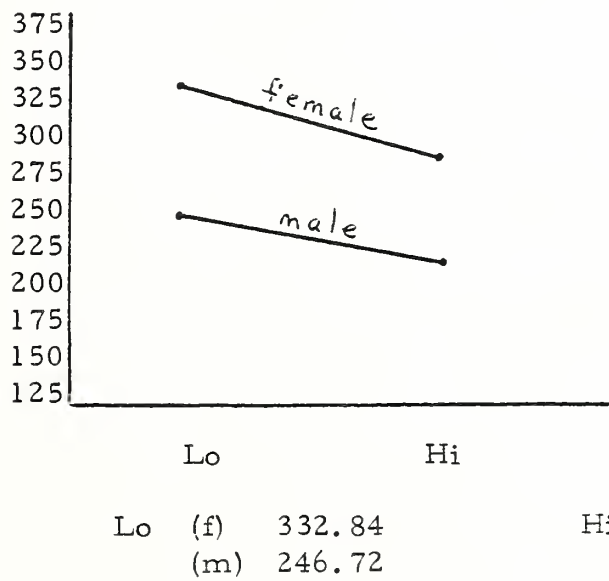


Figure 1

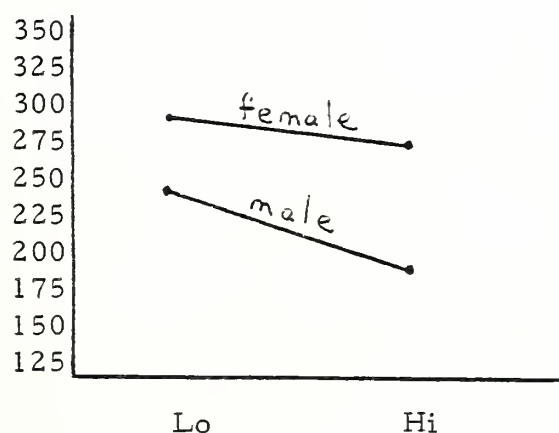


Table 3

Total Time After Provocation

Source	df	SS	F	p <
BP	1	21898.77	2.15	.14
RE	1	14595.87	1.43	.23
BP x RE	1	626.26	.06	.80
SE	1	51661.39	5.06	.03*
BP x SE	1	1159.63	.11	.73
RE x SE	1	8896.94	.87	.35
BP x RE x SE	1	9931.34	.97	.32

\*p < .05.



Lo (f) 288.09  
(m) 244.36

Hi (f) 272.71  
(m) 192.15

Figure 2





APPENDIX J

SUMMARY OF ANALYSES OF VARIANCE ON  
FACTORS FROM EXPERIMENTAL DATA

Table 1

Factors	Overall means	Significant effects	Marginal effects
I Self-reported inhibition of anger expression	- .87	none	none
II Maternal exhortation against anger expression	-3.13	RE (.05)	none
III Endorsement of direct anger expression in close relation- ships regardless of sex	-2.78	none	none
IV Rejection of indirectness in anger expression to offspring	-2.08	BP (.05) RE (.01)	none
V Endorsement of anger response to provocation by outsiders	-2.24	RE (.03)	none
VI Comfort with anger expres- sion--maternal identification	-1.73	none	RE x BP (.09)
VII Attributed maternal encour- agement of interracial aggression suppression	- .95	none	none
VIII Endorsement of inhibition of aggression	- .57	RE (.03)	none



Table 2

Factor II. Maternal Exhortation Against  
Anger Expression

Source	df	SS	F	p <
BP	1	7.74	2.22	.14
RE	1	14.14	4.05	.04*
RE x BP	1	3.58	1.03	.31
SE	1	.04	.01	.90
BP x SE	1	1.21	.35	.55
RE x SE	1	7.66	2.19	.14
RE x BP x SE	1	.33	.10	.75

\*p < .05.

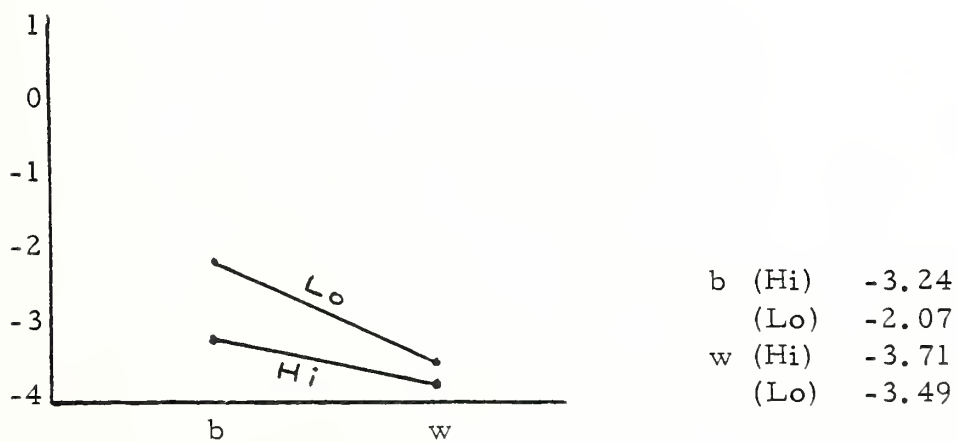


Figure 1



Table 3

Factor IV. Rejection of Indirectness in  
Anger Expression to Offspring

Source	df	SS	F	p <
BP	1	8.72	3.87	.05*
RE	1	16.82	7.47	.01*
RE x BP	1	.40	.18	.67
SE	1	.30	.13	.71
BP x SE	1	3.13	1.39	.24
RE x SE	1	5.48	2.44	.12
RE x BP x SE	1	3.41	1.51	.22

\*p < .05.

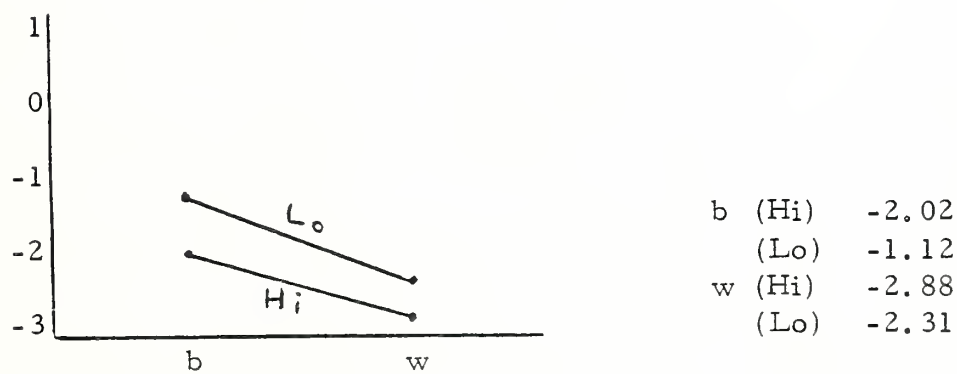


Figure 2



Table 4

Factor V. Endorsement of Anger Response  
to Provocation by Outsiders

Source	df	SS	F	p <
BP	1	6.19	1.97	.16
RE	1	16.20	5.15	.02*
RE x BP	1	7.30	2.32	.13
SE	1	2.68	.85	.35
BP x SE	1	1.45	.46	.49
RE x SE	1	4.34	1.38	.24
RE x BP x SE	1	1.20	.38	.53

\*p < .05.

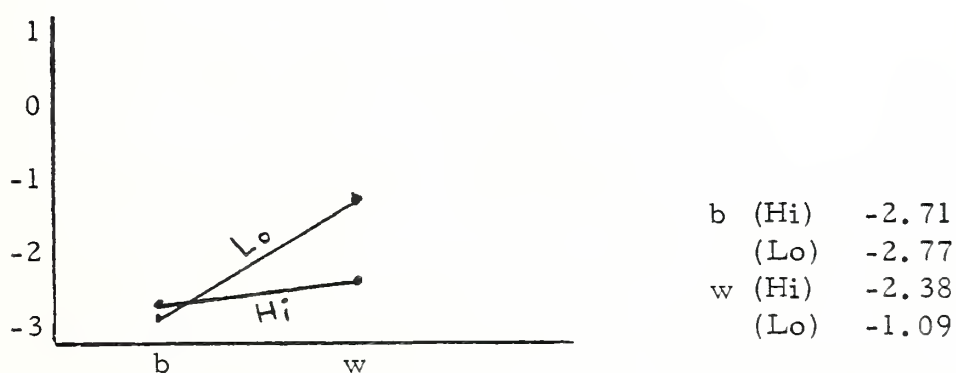


Figure 3





Table 5

Factor VIII. Endorsement of Inhibition  
of Aggression

Source	df	SS	F	p <
BP	1	4.42	1.79	.18
RE	1	12.77	5.16	.02*
RE x BP	1	1.69	.69	.41
SE	1	.25	.10	.75
BP x SE	1	2.40	.97	.32
RE x SE	1	.66	.27	.60
RE x BP x SE	1	2.67	1.08	.30

\*p < .05.

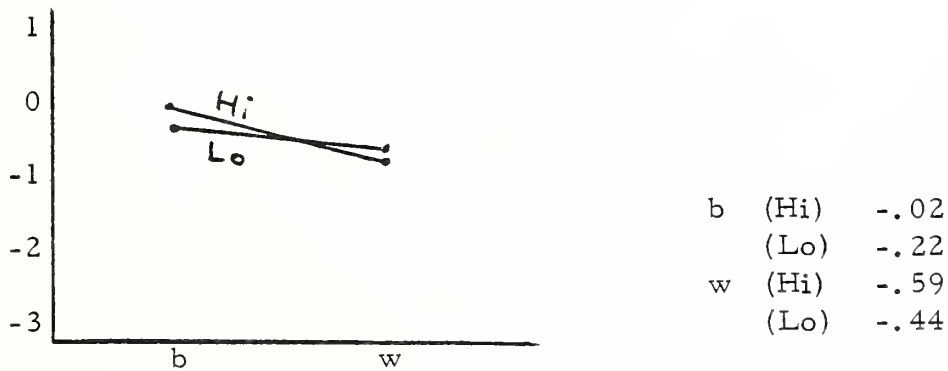


Figure 4



# APPENDIX K

## SUMMARY OF CORRELATIONS OF FACTORS WITH BEHAVIORS FROM EXPERIMENTAL STUDY

Table 1

Factors	Behaviors													
	SC	PC	AWB	AWA	AWC	NOTB	NOTA	NOTC	TTB	TTA	TTC	ANGO	ANI	SUS
I	.09	-.12	.00	-.08	-.07	.01	-.01	-.02	-.03	.03	.07	.11	.05	.07
II	.18	.01	.00	.07	.08	.02	.24	.16	.00	.21	.20	.11	-.04	-.01
III	-.16	.01	.04	.16	.14	-.08	-.01	.07	-.11	-.13	-.01	.05	-.14	-.18
IV	.12	-.06	-.17	-.25*	-.10	.01	.09	-.03	.04	.23	.17	-.27*	.11	.11
V	-.17	.04	-.06	.05	.12	.15	-.09	-.25*	.17	-.15	-.36*	.04	.01	-.06
VI	.07	-.03	-.01	-.12	-.12	.04	-.01	-.06	-.01	-.01	.00	-.05	-.13	-.16
VII	-.06	-.04	.18	.21	.05	.04	.06	-.01	-.12	-.12	.08	-.02	.12	.02
VIII	-.01	.00	-.12	-.19	-.09	-.08	-.03	.08	.01	.01	.08	-.05	.07	.15

\*p < .05.



# APPENDIX L

## SUMMARY OF CORRELATIONS OF FACTORS WITH BEHAVIORS FROM EXPERIMENTAL STUDY WITHIN EACH BLOOD PRESSURE GROUP

Table 1

Factors	Behaviors														
	SC	DC	AWB	AWA	AWC	NOTB	NOTA	NOTC	TTB	TTA	TTC	ANGO	ANI	ANX	SUS
<u>High BP</u>															
I	.18	-.14	-.17	-.22	-.08	.14	-.14	-.25	-.02	.15	.17	-.08	.00	.01	-.12
II	.02	.14	-.07	.00	.09	.12	.02	-.11	.07	.01	-.08	.16	-.01	-.09	.12
III	-.28	.23	.06	.15	.11	.02	.05	.02	.03	-.09	-.12	.06	.00	-.21	-.01
IV	.29	-.24	-.14	-.39*	-.30	.10	-.14	-.22	-.03	.12	.16	-.37*	.34*	.17	-.10
V	-.16	.20	.00	.00	.03	-.02	-.14	-.08	.04	-.46*	-.53*	.10	.18	.10	-.24
VI	.04	-.15	.03	-.06	-.11	-.10	.05	.15	-.21	-.04	.16	-.13	.05	.02	.04
VII	.00	.15	.13	.12	.06	.19	.15	-.10	.13	.13	.02	.23	.03	-.14	.01
VIII	.11	-.14	-.17	-.31	-.16	-.15	-.21	.01	-.03	.10	.13	-.01	-.13	.02	.11



Table 1 (continued)

Factors	Behaviors														
	SC	DC	AWB	AWA	AWC	NOTB	NOTA	NOTC	TTB	TTA	TTC	ANGO	ANI	ANX	SUS
<u>Low BP</u>															
I	.10	-.06	.16	.13	.00	-.04	.06	.09	.02	-.01	-.02	.32	-.10	-.03	-.32
II	.26	-.13	.14	.16	.04	.09	.38*	.39*	-.08	.30	.37*	.08	.13	.17	-.07
III	-.12	-.24	.09	.20	.13	-.23	-.04	.21	-.30	-.27	.09	.04	-.12	-.04	.11
IV	-.23	.02	-.13	.01	.11	.04	.32	.22	.02	.26	.20	-.15	.20	.33	-.10
V	-.30	-.17	-.10	.16	.24	.30	-.04	-.39*	.25	.12	-.22	-.03	.07	-.06	.22
VI	-.01	.06	.03	-.25	-.25	.19	-.06	-.27	.12	-.08	-.24	.10	-.19	-.26	.16
VII	-.08	-.20	.23	.36*	.15	-.06	-.01	-.06	-.29	-.09	.14	-.30	.16	.07	.32
VIII	-.09	-.10	-.08	.09	.14	.03	.15	.14	.12	.12	.03	-.14	.14	.16	.04

\*p &lt; .05.





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